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ENVIRONMENTAL COMPLIANCE PROJECT DATA SHEET

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MT-8	PHASE 7 TRAFFIC CONTROL ABBOTSFORD DRIVE STA 132+29 TO STA 142+00
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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: G. THOMAS
 DRAWN BY: C. MILLER
 SHEET CHK'D BY: J. KUNAY
 CROSS CHK'D BY:
 APPROVED BY:
 DATE: AUGUST 2024



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FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

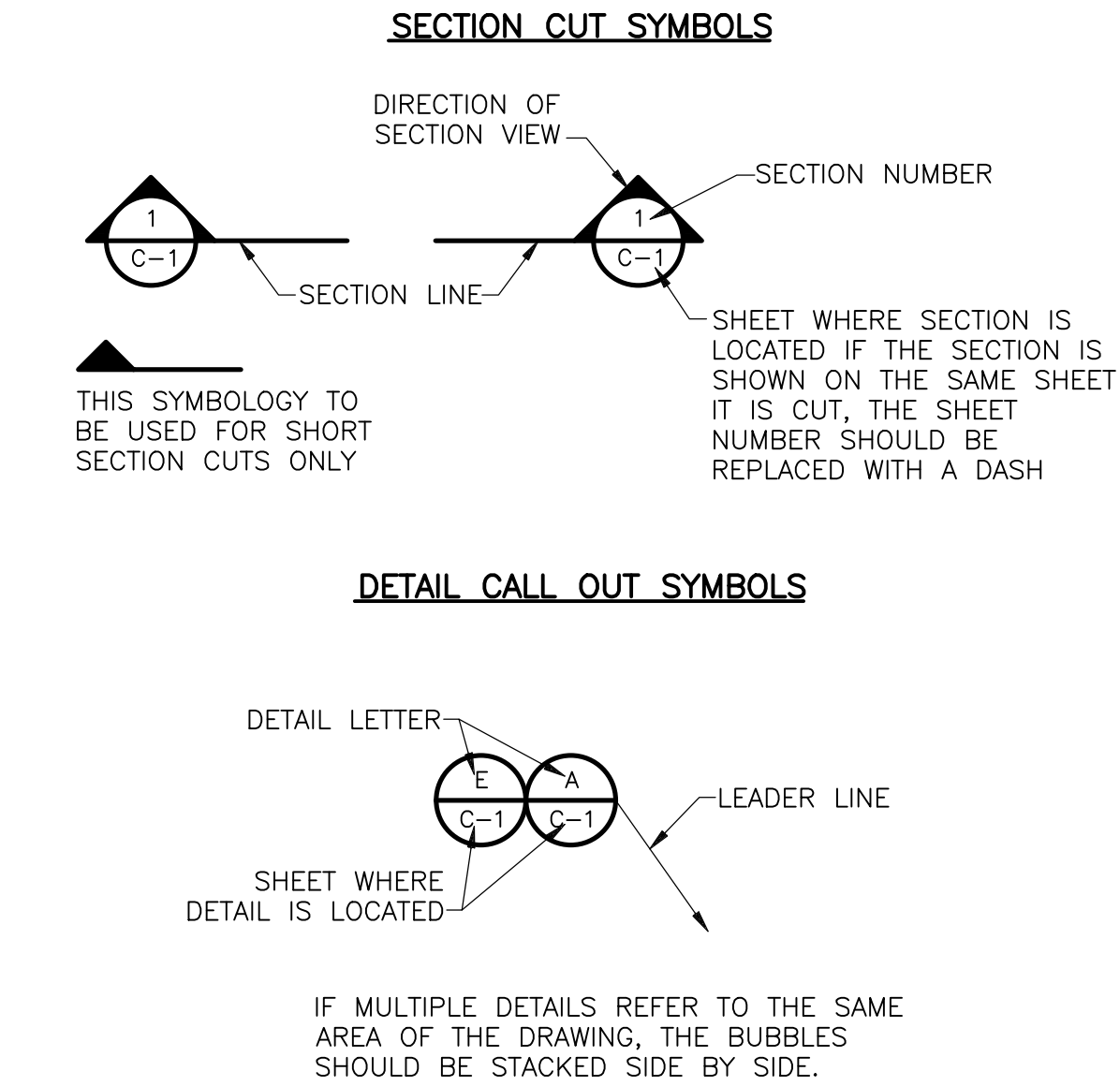
DRAWING INDEX

PROJECT NO. 5003-244105
 FILE NAME: G001NFX.DWG
 SHEET NO.
G-1

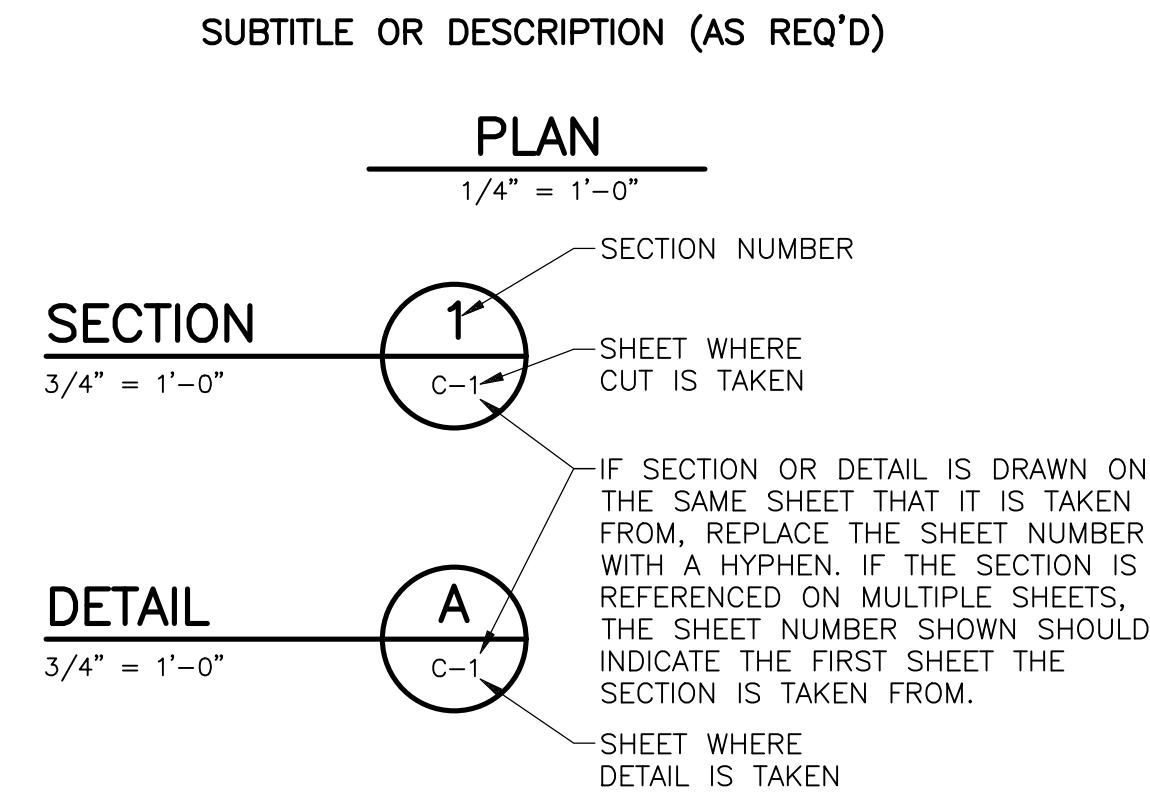
LEGEND

-----	(QL-C) OR (QL-D)	⊙	SANITARY MANHOLE	⊞	VDOT ELECTRIC BOX
-----	PROPERTY LINE	⊙	STORM INLET/MANHOLE	⊞	TRAFFIC SIGNAL
-----	PERMANENT EASEMENT	⊙	WATER METER	⊞	SIGN
-----	TEMPORARY EASEMENT	⊙	SANITARY CLEAN OUT	⊞	ELECTRIC BOX
-----	INDEX CONTOUR	⊙	TELEPHONE PEDESTAL	⊞	BOLLARD
-----	INTERMEDIATE CONTOUR	⊙	MARKER POST	⊞	HAND HOLE
-----	UNDERGROUND TELEPHONE	⊙	VALVE	⊞	GUY WIRE
-----	UNDERGROUND ELECTRIC	⊙	FIRE HYDRANT	⊞	FLAG POLE
-----	UNKNOWN UTILITY	⊙	HANDHOLE/BOX		
-----	SANITARY SEWER	⊙	SPRINKLER HEAD		
-----	WATER	⊙	PED/TRANSFORMER		
-----	GAS	⊙	METER		
-----	CATV	⊙	FURNISHED SURVEY CONTROL		
-----	TRAFFIC CONTROL	⊙	LIGHT POLE		
-----	STORM	⊙	TRAFFIC CONTROL POLE		
-----	EXISTING TREE LINE	⊙	POLE		
-----	EXISTING CHAIN LINK FENCE	⊙	POWER POLE		
-----	SANITARY/FM	⊙	TEST PIT		
-----	LIMIT OF DISTURBANCE /NOMINAL TRENCH WIDTH	⊙	WETLAND FLAG		
-----	EDGE OF STREAM				
-----	FLOODPLAIN				
-----	WETLAND				
-----	EXISTING PAVEMENT				

SYMBOLS



DRAWING SECTION AND DETAIL TITLES



ABBREVIATIONS

AATUR	ABANDONED ACCORDING TO UTILITY RECORDS
APPROX	APPROXIMATE(LY)
ARV	AIR RELEASE VALVE
ASPH	ASPHALT
B	BORING
BM	BENCHMARK
C&G	CURB AND GUTTER
CAV	COMBINATION AIR VALVE
CB	CATCH BASIN
CI	CAST IRON
CL	CENTERLINE
CONC	CONCRETE
D.B.	DEED BOOK
DHF	DRILL HOLE FOUND
DIA	DIAMETER
DI	DUCTILE IRON
E	ELECTRICAL, EAST
ECMP	ELLIPTICAL CORRUGATED METAL PIPE
ELEV	ELEVATION
EOI	END OF ELECTRONIC DESIGNATING INFORMATION
EDRI	END OF RECORD INFORMATION
EP	EDGE OF PAVEMENT
ESMT.	EASEMENT
EX/EXIST	EXISTING
FM	FORCE MAIN
FO	FIBER OPTIC
FT	FEET/FOOT
G	NATURAL GAS
GPS	GLOBAL POSITIONING SYSTEM
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HH	HANDHOLE
ID	INSIDE DIAMETER
IN	INCH
INV	INVERT
IPF	IRON PIPE FOUND
JT	JOINT TRENCH (METRO OWNED)
LF	LINEAR FEET
MH	MANHOLE
MAX	MAXIMUM
MIN	MINIMUM
MISC	MISCELLANEOUS
MONF	CONCRETE MONUMENT FOUND
N	NORTH
NAP	NO ASSOCIATED PIPING FOUND FROM STRUCTURE
NAC	NO ASSOCIATED CABLE FOUND FROM STRUCTURE
NE	NORTHEAST
NTS	NOT TO SCALE
NW	NORTHWEST
OE	OVERHEAD ELECTRIC
OL-C	DEPICTED ACCORDING TO RECORD INFORMATION AND EXISTING ASSOCIATED UTILITY STRUCTURES. NO ELECTRONIC INFORMATION WAS OBTAINED.
OL-D	DEPICTED ACCORDING TO RECORD INFORMATION. NO ELECTRONIC INFORMATION WAS OBTAINED.
OPF	OPEN PIPE FOUND
PG	PAGE
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
PLA	PLASTIC
PVC	POLYVINYL CHLORIDE
R/W	RIGHT-OF-WAY
RCP	REINFORCED CONCRETE PIPE
REQ'D	REQUIRED
RT	STATE ROUTE
S	SOUTH
SE	SOUTHEAST
SW	SOUTHWEST
SS	SANITARY SEWER
SD	STORM DRAIN
ST	STREET
STA	STATION
STL	STEEL
SVC	SERVICE
T-DUCT	TELEPHONE DUCT BANK
TRV, TRAV	TRAVERSE
TV	TELEVISION
T/P	TOP OF PIPE
TYP	TYPICAL
UE	UNDERGROUND ELECTRIC
UNK	UNKNOWN
UT	UNDERGROUND TELEPHONE
VDOT	VIRGINIA DEPARTMENT OF TRANSPORTATION
VERT	VERTICAL
VZN	VERIZON
W	WATER, WIDTH
WRPD	WRAPPED STEEL
"X" FND	CHISELED "X" FOUND

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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: G. THOMAS
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FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

LEGEND,
 SYMBOLS AND ABBREVIATIONS

PROJECT NO.	5003-244105
FILE NAME:	G002NFX.DWG
SHEET NO.	G-2

GENERAL NOTES

(THESE GENERAL NOTES SHALL BE USED WHERE THEY ARE APPLICABLE TO THE PROJECT PLANS)

EROSION AND SEDIMENT CONTROL

I. EROSION CONTROL NARRATIVE

PRIOR TO ANY LAND DISTURBING OPERATIONS, THE EROSION CONTROLS, AS SPECIFIED BY THE ENGINEERING PLANS, SHALL BE INSTALLED. ALL MECHANICAL AND VEGETATIVE PRACTICES SHALL BE IN CONFORMANCE WITH THE REQUIREMENTS CONTAINED IN THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL AND THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK. SLOPE AREAS THAT CANNOT BE ADEQUATELY STABILIZED BY SEEDING, SHALL BE SODDED AND STAKED. AS DISTURBED AREAS, NOT TO BE CONSTRUCTED UPON, ARE FINAL GRADED, THEY SHALL BE PREPARED, TIME AND FERTILIZER APPLIED, SEEDING AND MULCHED. FOR THE AREAS OUTSIDE THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) RIGHT-OF-WAY, THE SEED SHALL CONSIST OF A MIXTURE OF KENTUCKY 31 TALL FESCUE AND KENBLUE IN ACCORDANCE WITH DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES SPECIFICATIONS OR COUNTY APPROVED ALTERNATE SEED. FOR AREAS LOCATED WITHIN THE VDOT RIGHT-OF-WAY, THE SEED MIXTURE SHALL BE IN CONFORMANCE WITH CURRENT VDOT REQUIREMENTS. SEDIMENT CONTROLS AND MECHANICAL DEVICES SHALL BE REMOVED FROM CONTRIBUTING AREAS AS THEY BECOME STABILIZED. THIS RESTORATION WORK WILL BE PERFORMED WITHIN 7 DAYS AFTER FINAL GRADING. ALL TEMPORARY SEDIMENT CONTROLS AND MECHANICAL DEVICES SHALL BE REMOVED FROM CONTRIBUTING AREAS AS THEY BECOME STABILIZED. FOR ADDITIONAL DETAILS, REFER TO THE CURRENT EDITION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL.

II. EROSION, SEDIMENTATION, AND LAND CONSERVATION NOTES

- MEASURES TO CONTROL EROSION AND SILTATION SHALL BE PROVIDED PURSUANT TO AND IN COMPLIANCE WITH CURRENT FEDERAL, STATE AND LOCAL REGULATIONS. THE INFORMATION CONTAINED IN THE CONSTRUCTION PLANS AND/OR THE APPROVAL OF THE PLANS SHALL IN NO WAY RELIEVE THE CONTRACTOR OR HIS AGENT OF ANY LEGAL RESPONSIBILITY WHICH MAY BE REQUIRED BY THE CODE OF VIRGINIA OR ANY ORDINANCE ENACTED BY THE COUNTY OF FAIRFAX.
- ALL AREAS, ON OR OFF-SITE, WHICH ARE DISTURBED BY THIS CONSTRUCTION AND WHICH ARE NOT PAVED OR BUILT UPON SHALL BE ADEQUATELY STABILIZED TO CONTROL EROSION AND SEDIMENTATION. ACCEPTABLE STABILIZATION SHALL CONSIST OF PERMANENT GRASS SEED MIXTURE INSTALLED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. ALL SLOPES 2:1 AND GREATER SHALL BE SODDED AND STAKED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE ENGINEER.
- ANY DISTURBED AREA NOT PAVED, PERMANENTLY SEEDING, SODDED, OR BUILT UPON BY 1 NOVEMBER OR DISTURBED AFTER THAT DATE, IS TO BE SEEDING WITHIN 14 DAYS WITH BATS, ABRUZZI RYE OR APPROVED EQUIVALENT, AND MULCHED WITH HAY OR STRAW MULCH AT THE RATE OF 3 TONS PER ACRE. FOR ADDITIONAL DETAILS, REFER TO THE CURRENT EDITION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL.
- NO AREA SHALL BE DENUDED AND NOT BE DISTURBED FOR A PERIOD LONGER THAN 14 DAYS IN ACCORDANCE WITH THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL.
- TEMPORARY DIVERSIONS, SEEDING AND MULCHED OR STAKED STRAW BALE DIVERSIONS AND OTHER CONTROL MEASURES NECESSARY ARE TO BE PLACED AS INDICATED ON THE DRAWINGS PRIOR TO OR AS THE FIRST STEP IN EXCAVATION.
- WHEN IN ACCORDANCE WITH STATE AND FEDERAL JOB SAFETY REQUIREMENTS, ALL EXCAVATED MATERIAL IS TO BE PLACED ON THE UPHILL SIDE OF TRENCHES. NO MATERIAL IS TO BE PLACED IN STREAMS. ANY STOCKPILED MATERIAL WHICH WILL REMAIN IN PLACE LONGER THAN 14 DAYS IS TO BE SEEDING FOR TEMPORARY VEGETATION AND MULCHED. WHERE SPOIL IS PLACED ON THE DOWNHILL SIDE OF TRENCH, IT IS TO BE BACK-SLOPED TO DRAIN TOWARD THE TRENCH. WHEN NECESSARY TO DEWATER THE TRENCH, THE PUMP DISCHARGE HOSE MUST OUTLET IN A STABILIZED AREA OR A SEDIMENT BASIN.
- WHERE STREAM CROSSINGS ARE REQUIRED FOR EQUIPMENT, TEMPORARY CULVERTS SHALL BE PROVIDED.
- DURING CONSTRUCTION, ALL STORM SEWER INLETS WILL BE PROTECTED BY SILT TRAPS, MAINTAINED AND MODIFIED AS REQUIRED BY CONSTRUCTION PROGRESS.
- ALL DISTURBED AREAS ARE TO BE SEEDING AND MULCHED OR SODDED WITHIN 5 DAYS AFTER BACKFILL OF THE APPLICABLE TRENCH SECTION, IN ACCORDANCE WITH THE PROVISIONS CONTAINED IN THE PROJECT SPECIFICATIONS RELATING TO SEEDING AND SODDING. SPEED IS THE ESSENTIAL LAND CONSERVATION ELEMENT FOR A LINEAR PROJECT.
- FOR FURTHER REQUIREMENTS AND DETAILS OF TREE PRESERVATION, PLANTING, EROSION AND SEDIMENT CONTROL, SEE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL AND/OR THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.
- ALL EROSION AND SEDIMENT CONTROLS SHALL BE REMOVED WITHIN 30 DAYS AFTER THE PROJECT IS STABILIZED. (MS-13)
- AN EROSION AND SEDIMENT CONTROL CONTRACTOR CERTIFICATION (E.S.C.C.C.) IS REQUIRED FOR ALL LAND DISTURBING ACTIVITIES.
- THE CONTRACTOR SHALL PROPERLY INSTALL AND MAINTAIN EROSION AND SEDIMENT CONTROLS FOR THE LIFE OF THE PROJECT; AND ROUTINELY CHECK CONTROL DEVICES BEFORE, DURING AND AFTER STORM EVENTS.

CONSTRUCTION NOTES

- ALL CONSTRUCTION, INCLUDING ANY PROPOSED LANDSCAPING, SHALL CONFORM TO THE CURRENT EDITION OF THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL (PFM) AND THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) STANDARDS AND SPECIFICATIONS AND SHALL CONFORM TO THE CURRENT EDITION OF THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE.
- ALL CONSTRUCTION WITHIN THE VDOT RIGHT-OF-WAY SHALL CONFORM TO THE PROVISIONS CONTAINED IN THE VDOT LAND USE PERMIT ISSUED FOR THIS LOCATION. THE CONTRACTOR SHALL BE THOROUGHLY FAMILIARIZED WITH THE REQUIREMENTS OF THIS LAND USE PERMIT PRIOR TO THE START OF ANY CONSTRUCTION IN VDOT RIGHT-OF-WAY. THE SPECIAL PROVISIONS IN FORM MP-63 ARE A PART OF THE VDOT LAND USE PERMIT.
- UNLESS MORE STRINGENT COMPACTION REQUIREMENTS ARE INDICATED ON THE PLANS OR IN THE SPECIFICATIONS, THE BACKFILL OF EMBANKMENT MATERIAL, THE INSTALLATION OF TRENCH BACKFILL AND THE RESTORATION OF DISTURBED AREAS SHALL BE COMPACTED IN ACCORDANCE WITH THE CURRENT EDITION OF THE VDOT ROAD AND BRIDGE SPECIFICATIONS. ALL COMPACTION SHALL BE AT $\pm 2\%$ OF THE OPTIMUM MOISTURE CONTENT.
- ALL SUBGRADE, SUBBASE, BASE AND SHOULDER MATERIAL SHALL BE PLACED AND COMPACTED TO THE DENSITY SPECIFIED IN THE CURRENT EDITION OF THE VDOT ROAD AND BRIDGE SPECIFICATIONS. ALL COMPACTION SHALL BE AT $\pm 2\%$ OF THE OPTIMUM MOISTURE CONTENT.
- THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS OF CLEANING TRUCKS AND/OR OTHER EQUIPMENT OF MUD PRIOR TO ENTERING THE VDOT RIGHT-OF-WAY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CLEAN ALL STREETS, ALLAY DUST AND TO TAKE WHATEVER MEASURES NECESSARY TO ENSURE THE ROAD(S) ARE MAINTAINED IN A CLEAN, MUD AND DUST FREE CONDITION AT ALL TIMES.
- TEMPORARY OR PERMANENT PAVEMENT PATCHES ARE TO BE PLACED IN ALL ROADWAY CUTS WITH HOT MIX THE SAME DAY THE CUT IS MADE IN ACCORDANCE WITH VDOT REQUIREMENTS. SEE SPECIAL PROVISIONS FOR PAVEMENT OPEN CUTS, FORM LUP-0C NOVA FOR DETAILS.
- THE TOP ELEVATION OF EXISTING MANHOLES SHALL BE ADJUSTED TO MEET THE FINAL PAVEMENT ELEVATION AT THE TIME OF FINAL PAVING OPERATIONS. ALL MANHOLES ARE TO BE PROTECTED FROM THE TRAVELING PUBLIC. NO MANHOLE IS TO BE RAISED ABOVE THE TOP ELEVATION OF THE ROADWAY WITHOUT THE APPROPRIATE TRANSITION.

- CONTRACTOR IS TO ADJUST MANHOLE, VALVE, AND METER BOX COVERS BEFORE PLACING FINAL SURFACE PAVEMENT.
- THE CONTRACTOR SHALL VISIT THE SITE AND SHALL VERIFY EXISTING CONDITIONS PRIOR TO SUBMITTING A BID FOR THE CONSTRUCTION OF THE PROJECT.
- WHERE EXISTING NATURAL DRAINAGE DITCHES OR STREAM BANKS ARE DISTURBED DURING CONSTRUCTION THE CONTRACTOR SHALL RESTORE THESE AREAS TO ORIGINAL ALIGNMENT, GRADE AND INVERT.
- PROPOSED TOP OF CURB GRADES SHALL BE FIELD ADJUSTED AS REQUIRED TO CONFORM TO THE INTENT OF THE TYPICAL SECTION; A SMOOTH GRADE SHALL BE MAINTAINED FROM THE CENTERLINE TO THE PROPOSED EDGE OF PAVEMENT OR FACE OF CURB TO PRECLUDE THE FORMING OF FALSE GUTTERS AND/OR THE PONDING OF WATER ON THE ROADWAY. THE EXISTING PAVEMENT SHALL BE RECAPPED AND/OR REMOVED AND REPLACED AS REQUIRED TO ACCOMPLISH THIS REQUIREMENT. ALL CURB FORMS SHALL BE INSPECTED FOR HORIZONTAL AND VERTICAL ALIGNMENT BY FAIRFAX COUNTY OR THEIR AUTHORIZED REPRESENTATIVES PRIOR TO PLACING OF CONCRETE.
- THE FOLLOWING PROVISIONS SHALL APPLY TO THE USE OF SHEETING AND SHORING:
 - SHEETING AND SHORING OR OTHER APPROVED METHODS FOR TRENCH BRACING WILL BE REQUIRED ON THIS CONTRACT AS NEEDED TO MEET ALL SAFETY REQUIREMENTS.
 - UNLESS OTHERWISE DIRECTED BY THE ENGINEER, SHEETING AND SHORING WILL BE REMOVED FROM ALL TRENCHES PRIOR TO BACKFILLING OPERATIONS.
 - UNLESS SPECIFICALLY IDENTIFIED IN THE CONTRACT DOCUMENTS, NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR SHEETING AND SHORING.
- THE CONTRACTOR SHALL RESTORE ALL DRIVEWAYS DISTURBED DURING CONSTRUCTION. RESTORATION SHALL CONSIST OF THE FOLLOWING:
 - GRAVEL DRIVEWAY - PROVIDE MINIMUM 6" COMPACTED 21A
 - ASPHALT DRIVEWAY - PROVIDE 6" COMPACTED 21A WITH MINIMUM 2" SM-9.5A OVERLAY
 - CONCRETE DRIVEWAY - PROVIDE A NEAT SAWCUT CONNECTION, MINIMUM 4" COMPACTED 21A AND 5" CLASS A3 CONCRETE WITH WWF 6X6 - W2.9 X W2.9
- WHERE A PROPOSED PIPE CROSSES OR PARALLELS A STREET, THE ASPHALT SHALL BE NEATLY SAWCUT TO FULL DEPTH. AFTER INSTALLATION OF THE PIPE, THE ROADWAY SHALL BE PATCHED IN ACCORDANCE WITH THE VDOT LAND USE PERMIT ISSUED FOR THE PROJECT.
- HORIZONTAL LOCATION OF THE SERVICE CONNECTIONS AT SANITARY SEWER MAINS, IF INDICATED ON THE CONSTRUCTION PLANS, WERE TAKEN FROM TELEVISION INSPECTION REPORTS. ALL SERVICE CONNECTIONS WERE SHOWN TO BE IN THE UPPER TWO QUADRANTS OF THE MAINS. EXCEPT FOR INTERPOLATION OF THE INVERT AT THE SANITARY MAINS, THE ELEVATIONS AND VERTICAL LOCATIONS OF THE SERVICE CONNECTIONS ARE NOT KNOWN. IN SEWER MAINS AS NOTED, TELEVISION INSPECTIONS DID NOT DETECT ANY SERVICE CONNECTIONS AND THE LOCATIONS SHOWN ON THE DRAWING ARE THE MOST PROBABLE POSITIONS FOR SERVICE CONNECTIONS.
- THE PAVEMENT DESIGN IN THE CONSTRUCTION PLANS WAS PREPARED BASED ON AVAILABLE SUBSURFACE INFORMATION INCLUDING LABORATORY CALIFORNIA BEARING RATIO (C.B.R.) TESTS THAT WERE PERFORMED DURING THE DESIGN SUBSURFACE INVESTIGATION. WHEN THE CONTRACTOR REACHES THE SUBGRADE ELEVATION, ADDITIONAL CBR TEST LOCATIONS MAY BE DIRECTED BY THE ENGINEER FOR SELECTED LOCATIONS BASED ON ACTUAL FIELD CONDITIONS OBSERVED. THE CBR SAMPLES AND TESTS SHALL BE PERFORMED BY A GEOTECHNICAL ENGINEERING FIRM UNDER CONTRACT WITH FAIRFAX COUNTY. THE RESULTS OF THE ENGINEER'S EVALUATION OF THE CBR LABORATORY TESTS SHALL BE OBTAINED IN WRITING PRIOR TO THE PLACEMENT OF ANY SUBBASE OR BASE MATERIAL IN THE AREA(S) UNDER CONSIDERATION. THE PROPOSED PAVEMENT DESIGN FOR THE AREA(S) UNDER CONSIDERATION WILL EITHER BE CONFIRMED OR ADJUSTED BY THE ENGINEER BASED ON THE RESULT OF THE C.B.R. TEST RESULTS. THE CONTRACTOR SHALL COOPERATE WITH ENGINEER BY MODIFYING CONSTRUCTION ACTIVITIES AND/OR SCHEDULING IN ORDER TO PERMIT THE ADDITIONAL CBR TESTING. THE CONTRACTOR SHALL NOT BE ENTITLED TO ANY MONETARY DAMAGES WHATSOEVER FOR ANY DELAYS RESULTING FROM THIS TESTING. THE CONTRACTOR'S SOLE RELIEF IS A TIME EXTENSION GRANTED IN ACCORDANCE WITH ARTICLE 8.3.

TRANSPORTATION MANAGEMENT PLAN

- THE CONTRACTOR SHALL BE REQUIRED TO SUBMIT CHANGES TO APPROVED TRANSPORTATION MANAGEMENT PLANS FOR APPROVAL BY VDOT A MINIMUM OF 30 WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAILY TRAFFIC CONTROL SUCH AS LANE CLOSURES, FLAGGERS, DRIVEWAY ENTRANCES, ETC., TO PROPERLY MAINTAIN TRAFFIC THROUGHOUT THE PROJECT.
- EXISTING SURFACE, BASE, AND SUBBASE MATERIAL WHICH WILL BE DEMOLISHED OR OBLITERATED DURING CONSTRUCTION AND WHICH IS DETERMINED SUITABLE BY THE ENGINEER, SHALL BE SALVAGED AND UTILIZED FOR BACKFILL.
- ALL REQUIRED CONSTRUCTION SIGNING, TEMPORARY PAVEMENT WIDENING, TEMPORARY LAND STABILIZATION, TRAFFIC BARRIERS, TEMPORARY PAVEMENT MARKINGS, ERADICATION, ETC., SHALL BE INCLUDED IN THE CONTRACTOR'S BID PRICE FOR TRAFFIC MAINTENANCE.
- ALL TRAFFIC MAINTENANCE SHALL CONFORM WITH THE FOLLOWING AND THE LATEST REVISIONS THERETO: THE VIRGINIA WORK AREA PROTECTION MANUAL, VA ROAD AND BRIDGE SPECIFICATIONS, VA ROAD AND BRIDGE STANDARDS AND THE FHWA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- ALL EXISTING SIGNS SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
- CONTRACTOR SHALL MAINTAIN ACCESS TO ALL DRIVEWAY ENTRANCES DURING CONSTRUCTION.
- TEMPORARY CLOSURE AFFECTING EGRESS TO ADJACENT PROPERTIES SHALL BE COORDINATED WITH AFFECTED PARTIES.
- PEDESTRIAN DETOUR SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION ACCORDING TO VIRGINIA WORK AREA PROTECTION AND MUTCD GUIDELINES. THE CONTRACTOR SHALL INFORM THE VDOT TRAFFIC OPERATIONS CENTER OF ANY LANE CLOSURES AND SUBSEQUENT OPENINGS ON A DAILY BASIS BY CALLING 703-877-3449.

GRAVITY SANITARY SEWER

- ALL SANITARY SEWER IN THIS CONTRACT SHALL BE 36-INCH DUCTILE IRON PIPE (DI) UNLESS OTHERWISE NOTED.
- AS-BUILT DRAWINGS FOR ALL NEW SANITARY SEWER INSTALLATIONS AND/OR ADJUSTMENTS TO EXISTING SANITARY SEWER FACILITIES SHALL BE PREPARED IN ACCORDANCE WITH SECTION 10-0104 OF THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL.
- WHEN AN EXISTING SANITARY SEWER LINE IS REPLACED, ALL EXISTING SANITARY SEWER LATERAL SPUR LINES SHALL BE RECONNECTED TO NEW SANITARY SEWER. THESE SANITARY SEWER LATERAL SPUR LINE STREET TAPS SHALL BE PROVIDED STARTING AT A POINT 2- FEET TO 6- FEET FROM THE MAIN SEWER, OR IF NECESSARY, AT A LONGER DISTANCE TO ENSURE THAT THE EXISTING SANITARY SEWER LATERAL PIPE IS IN GOOD CONDITION.
- THE CONTRACTOR SHALL OBTAIN A FAIRFAX COUNTY PLUMBING PERMIT PRIOR TO THE CONNECTION OF ANY SANITARY SEWER SPUR LINE TO THE MAIN SANITARY SEWER.

SIDEWALKS AND TRAILS

- A MINIMUM OF 2 FOOT CLEARANCE IS REQUIRED BETWEEN THE WALKWAY EDGE AND ANY VERTICAL OBSTRUCTIONS SUCH AS TREES, UTILITY POLES, SIGNS, ETC., UNLESS OTHERWISE SPECIFICALLY NOTED ON THE PLANS AT EACH LOCATION.
- A 4 FOOT UTILITY STRIP IS REQUIRED BETWEEN THE EDGE OF THE WALKWAY AND THE BACK OF THE CURB AND GUTTER, UNLESS OTHERWISE NOTED ON THE PLAN.
- A MINIMUM 10 FOOT SEPARATION IS REQUIRED BETWEEN THE EDGE OF THE SIDEWALK AND THE EDGE OF THE PAVEMENT FOR NON CURB AND GUTTER ROADS, UNLESS OTHERWISE NOTED ON THE PLANS.
- ALL HANDRAIL MATERIAL AND INSTALLATION SHALL CONFORM TO THE CURRENT VDOT ROAD AND BRIDGE STANDARDS 601.05 STANDARD HANDRAIL METHOD OF LOCATING AND ERECTING. THE FOUNDATION DETAIL FOR HANDRAILS SHALL BE SPECIFIED IN THE CONSTRUCTION DRAWINGS.
- ALL VEGETATIVE MATERIAL WITHIN 10 FEET OF VERTICAL CLEARANCE FROM THE PROPOSED TRAIL SHALL BE REMOVED PRIOR TO TRAIL CONSTRUCTION. THE HORIZONTAL CLEARING LIMITS SHALL BE IN ACCORDANCE WITH THE DETAIL ON THE DETAIL SHEET. AN EXCEPTION TO THIS REQUIREMENT SHALL BE TO SAVE ANY TREES THAT ARE DESIGNATED ON THE CONSTRUCTION PLANS.
 - MINIMUM: 1% EXCEPT IN SAGS WITH ADEQUATE DRAINAGE
 - MAXIMUM: ROADWAY GRADE OR 5%, WHICHEVER IS GREATER.
- TRAIL GRADES TO ADHERE TO THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL. TRAIL GRADES GREATER THAN 6% SHALL BE MINIMIZED.
- ALL DRIVEWAYS SHALL BE GRADED AS INDICATED ON THE CONSTRUCTION PLANS TO CONFORM TO ALLOWABLE CROSS SLOPES FOR THE WALKWAY. THE CROSS SLOPES FOR WALKWAYS SHALL BE 1/4" PER FOOT OF WIDTH.
- THE MINIMUM ALLOWABLE TURNING RADIUS FOR WALKWAYS SHALL BE 20 FEET. ANY TURNING RADIUS LESS THAN 20 FEET, REQUIRED DUE TO FIELD ADJUSTMENTS, SHALL BE APPROVED BY THE ENGINEER.
- ALL MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO THE REQUIREMENTS FOR WALKWAYS IN THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL.
- UNLESS MORE STRINGENT COMPACTION REQUIREMENTS ARE NOTED ON THE PLANS, THE SUBGRADE FOR ALL WALKWAYS SHALL BE COMPACTED TO A MINIMUM OF 95% OF THEORETICAL MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT WITHIN THE TOLERANCE SPECIFIED IN THE CURRENT EDITION OF THE VDOT ROAD AND BRIDGE SPECIFICATIONS.
- SHARED USE PATHS SHALL BE A MINIMUM OF 8.0 FEET FROM THE FACE OF CURB UNLESS OTHERWISE NOTED ON THE PLAN.

TREE REMOVAL PROTECTION DURING CONSTRUCTION IN EASEMENTS



Denotes an existing tree not to be removed or damaged. All remaining trees within the easement limits can be removed as required to perform the construction. In addition, the contractor must remove any trees adversely affected by the construction to the extent that it is likely to die in the opinion of the county arborist. However, every effort will be made to avoid the removal or disturbance of remaining trees.



Denotes trees to have tree protection barricade (snow fence) at drip line as per article 12 of the Fairfax County Public Facilities Manual.



Denotes an existing tree to be removed. This includes the removal and / or grinding of stumps to a minimum of 12" below finished grade.

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DESIGNED BY: G. THOMAS
 DRAWN BY: C. MILLER
 SHEET CHK'D BY: J. KUNAY
 CROSS CHK'D BY:
 APPROVED BY:
 DATE: AUGUST 2024



FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

GENERAL NOTES I

PROJECT NO. 5003-244105
 FILE NAME: G003NFNT.DWG

SHEET NO.

G-3

GENERAL NOTES: UTILITIES

(THESE GENERAL NOTES SHALL BE USED WHERE THEY ARE APPLICABLE TO THE PROJECT PLANS)

MISS UTILITY: CALL 1-800-552-7001 OR 811

VA811.COM

UTILITIES NOTES

1. THE UTILITY INFORMATION SHOWN ON THESE PLANS IS TAKEN FROM INFORMATION PROVIDED BY AN UNDERGROUND UTILITY DESIGNATING AND LOCATING COMPANY AND IN SOME CASES, FROM INFORMATION RECEIVED FROM THE UTILITY COMPANIES. THE DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES DOES NOT GUARANTEE THAT THE UTILITY INFORMATION SHOWN ON THE PLANS IS COMPLETE OR ACCURATE. THE CONTRACTOR MUST VERIFY THE UTILITY LOCATIONS PRIOR TO CONSTRUCTION.
2. ALL EXISTING UNDERGROUND UTILITIES SHALL BE MARKED IN THE FIELD BY MISS UTILITY PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING THE FIELD MARKING OF UTILITIES WITH MISS UTILITY.
3. ALL EXISTING UNDERGROUND UTILITIES SHALL BE PHYSICALLY LOCATED BY THE CONTRACTOR PRIOR TO THE BEGINNING OF ANY CONSTRUCTION IN THE VICINITY OF THESE UTILITIES.
4. THE CONTRACTOR SHALL CONFORM TO THE PROVISIONS AS SPECIFIED IN THE CURRENT VIRGINIA ADMINISTRATIVE CODE (VAC) SECTION 20 VAC 5 - 309-140, EXCAVATOR'S RESPONSIBILITIES TO AVOID DAMAGE, DISLOCATING OR DISTURBANCE OF UTILITY LINES, AS FOLLOWS:

"ANY PERSON EXCAVATING AROUND UNDERGROUND UTILITY LINES SHALL TAKE ALL REASONABLE STEPS TO PROTECT SUCH UTILITY LINES. THESE STEPS SHALL INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- a. THE EXCAVATOR SHALL PLAN THE EXCAVATION IN SUCH A MANNER TO AVOID DAMAGE TO, AND MINIMIZE INTERFERENCE WITH, UNDERGROUND UTILITY LINES IN AND NEAR THE CONSTRUCTION AREA.
- b. THE EXCAVATOR SHALL EXPOSE THE UNDERGROUND UTILITY LINE TO ITS EXTREMITIES BY HAND DIGGING WITHIN THE EXCAVATION AREA WHEN EXCAVATION IS EXPECTED TO COME WITHIN TWO FEET OF THE MARKED LOCATION OF THE UNDERGROUND UTILITY LINE.
- c. THE EXCAVATOR SHALL NOT UTILIZE MECHANIZED EQUIPMENT WITHIN TWO FEET OF THE EXTREMITIES OF ALL EXPOSED UTILITY LINES.
- d. THE EXCAVATOR SHALL MAINTAIN A REASONABLE CLEARANCE, TO INCLUDE THE WIDTH OF THE UTILITY LINE, IF KNOWN, PLUS 24 INCHES, BETWEEN THE MARKED OR STAKED LOCATION OF AN UNDERGROUND UTILITY LINE AND THE CUTTING EDGE OR POINT OF ANY MECHANIZED EQUIPMENT, CONSIDERING THE KNOWN LIMIT OF CONTROL OF THE CUTTING EDGE OR POINT TO AVOID DAMAGE TO THE UTILITY LINE.
- e. THE EXCAVATOR SHALL PROVIDE PROPER SUPPORT FOR UNDERGROUND UTILITY LINES DURING EXCAVATION ACTIVITIES. DURING BACKFILL OPERATIONS, THE EXCAVATOR SHALL USE THE SAME OR SIMILAR BACKFILL MATERIAL THAT WAS ORIGINALLY AROUND THE UTILITY LINE, ENSURE THERE IS PROPER COMPACTION AROUND THE UTILITY LINE, PROTECT ALL TRACER WIRES, AND PROTECT OR REPLACE WARNING TAPES.
- f. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT THE EXISTING UTILITIES ARE DISCONNECTED, PRIOR TO CLEARING THE SITE OF TREES, BUILDINGS, FOUNDATIONS, ETC. WITHIN THE LIMITS OF CONSTRUCTION IN ACCORDANCE WITH THE REQUIREMENTS INDICATED ON THE CONSTRUCTION PLANS.
- g. CONTRACTORS SHALL NOTIFY OPERATORS WHO MAINTAIN UNDERGROUND UTILITY LINES IN THE AREA OF PROPOSED CONSTRUCTION, EXCAVATION OR BLASTING AT LEAST 2 WORKING DAYS IN ADVANCE, BUT NOT MORE THAN 10 WORKING DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION IN ACCORDANCE WITH CHAPTER 63 OF FAIRFAX COUNTY CODE. NAMES AND TELEPHONE NUMBERS OF SELECT OPERATORS OF UNDERGROUND UTILITY LINES IN FAIRFAX COUNTY APPEAR ON THIS SHEET. THESE NUMBERS WILL ALSO BE USED TO SERVE EMERGENCY CONDITION NOTICE AS REQUIRED BY CHAPTER 63 OF THE FAIRFAX COUNTY CODE. THIS IS NOT A COMPLETE LIST OF ALL UNDERGROUND UTILITY OPERATORS IN FAIRFAX COUNTY.
- h. LENGTHS OF PIPE SHOWN ON THE DRAWINGS ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
- i. IF PVC PIPE IS USED, ALL LATERAL SPUR CONNECTIONS SHALL BE MADE WITH MANUFACTURED PVC "TEE" OR "WYE" FITTINGS. NO SADDLES SHALL BE USED.
- j. LATERAL SPURS SHALL EXTEND 12" INSIDE PROPERTY LINES. IF THE UPPER ENDS OF THE LATERAL SPURS ARE GREATER THAN 6" BELOW THE GROUND SURFACE, THEN THE CONTRACTOR SHALL INSTALL TWO 45° BENDS AND A VERTICAL RISER (ALL 4" DIAMETER) TO WITHIN 4' OF THE GROUND SURFACE. THE INVERT SHOWN IN THE PROFILE IS AT THE BOTTOM OF THE LOWER 45° BEND.
- k. A WATERTIGHT CONNECTION SHALL BE MADE AT ALL PIPES ENTERING DRAINAGE STRUCTURES. IN ADDITION, WATERTIGHT CONNECTIONS SHALL BE MADE BETWEEN SECTIONS OF PIPE.
- l. INVERT ELEVATIONS SHOWN ON THE DRAWINGS ARE TAKEN AT THE FACE OF THE STRUCTURE.
- m. SHAPE THE INVERTS OF ALL STRUCTURES ACCORDING TO VDOT STANDARD IS-1.
- n. STORM SEWER AND CULVERT PIPE SHALL BE REINFORCED CONCRETE PIPE (RCP) TO CONFORM TO THE CURRENT A.A.S.H.T.O. DESIGNATION M170, UNLESS OTHERWISE DESIGNATED ON THE PLANS. CLASS III PIPE WILL BE REQUIRED WITHIN THE LIMITS OF VDOT RIGHT-OF-WAY, UNLESS OTHERWISE NOTED.
- o. MINOR FIELD ADJUSTMENTS IN THE ELEVATION AND ALIGNMENT OF THE STORM SEWER AND STRUCTURE MIGHT BE NECESSARY TO MEET EXISTING CONDITIONS AND PROPOSED FINAL GRADING. THE CONTRACTOR SHALL NOTIFY FAIRFAX COUNTY DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES PRIOR TO MAKING ANY NECESSARY ADJUSTMENTS.
- p. TOP OF STRUCTURES SHALL BE SET TO MATCH CURB AND GUTTER, SIDEWALK AND/OR DITCH CONSTRUCTION.
- q. A VIDEO INSPECTION OF ALL NEW OR MODIFIED STORM SEWERS IN VDOT RIGHT OF WAY WILL BE REQUIRED NO MORE THAN 60 DAYS IN ADVANCE OF PROJECT ACCEPTANCE BY VDOT.

VIENNA UTILITY BOARD 304-295-4543 OR 304-295-8563 (AFTER HOURS AND WEEKENDS)

PRIMARY UTILITY COMPANIES

AMERICAN TELEPHONE & TELEGRAPH CO. (AT&T)
 COLUMBIA GAS OF VIRGINIA
 COLUMBIA GAS TRANSMISSION CORP.
 COLONIAL PIPELINE CO.
 COX COMMUNICATIONS
 DOMINION TRANSMISSION, INC.
 DOMINION ENERGY
 FAIRFAX CO. WASTEWATER COLLECTION DIVISION
 FAIRFAX WATER
 FAIRFAX COUNTY PUBLIC SAFETY
 NORTHERN VIRGINIA ELEC. CO-OP (NOVEC)
 TRANSCO GAS PIPELINE CO.
 TOWN OF HERNDON PUBLIC WORKS
 TOWN OF VIENNA WATER SERVICE
 T-MOBILE
 UPPER OCCOQUAN SERVICE AUTHORITY (UOSA)
 SMART TRAFFIC SIGNAL SYSTEM
 PLANTATION PIPE LINE COMPANY
 VERIZON
 VIENNA WATER
 VIRGINIA AMERICAN WATER COMPANY
 WASHINGTON GAS
 WILLIAMS (TRANSCO) GAS PIPE LINE CORP.
 COMCAST

EMERGENCY

1-800-241-3624
 1-800-543-8911 OR 1-800544-5606
 1-800-835-7191 (24 HRS)
 1-800-926-2728
 (703) 462-8520
 1-888-264-8240 24/7
 1-888-333-4465
 (703) 323-1211
 (703) 698-5800 OR (703) 698-5613
 (703) 691-2131 OR 911
 (703) 335-0500 OR 1-888-335-0500
 1-800-440-8475 (24 HRS)
 (703) 435-6860
 (703) 255-6381 AFTER 5:00 PM., (703) 255-6385
 1-800-937-8997
 (703) 830-2200
 (703) 385-7987
 (866) 762-8442
 1-800-837-4966
 (703) 255-6385
 1-800-452-6863
 (703) 750-1400
 1-800-440-8475 OR (703) 368-3255 OFFICE
 1-800-266-2278

CAPITAL FACILITIES NOTIFICATION

PROJECT MANAGER: MESKEREM ESHETU
 SAFETY OFFICE
 WDCD DIVISION DIRECTOR

(703) 324-4514
 (571) 363-0866
 (703) 324-5124 OR (571) 236-1620

UTILITY STRIKE GUIDANCE

ANY UTILITY STRIKE OR UNPLANNED CONTACT RESULTING IN AN INTERRUPTION OF SERVICES IS TO BE CONSIDERED AN EMERGENCY SITUATION. IMMEDIATELY INITIATE THE FOLLOWING ACTIONS:

1. CALL 911 IMMEDIATELY AND CLEAR THE AREA
2. CALL THE UTILITY OPERATOR (GAS, CABLE, ELECTRIC, ETC.) IMMEDIATELY. DO NOT CALL MISS UTILITY.
3. DO NOT ATTEMPT TO REPAIR THE DAMAGE. DO NOT AUTHORIZE BACKFILLING IF THERE IS ANY DAMAGE.
4. COVERING OVER A DAMAGED UTILITY LINE MAY LEAD TO A SERIOUS ACCIDENT LATER.

APWA UNIFORM COLOR CODE LIST

RED	ELECTRIC POWER LINES, CABLES, CONDUITS AND LIGHTING CABLES
ORANGE	COMMUNICATION, ALARM OR SIGNAL LINES, CABLES OR CONDUIT
YELLOW	GAS, OIL, STEAM, PETROLEUM OR GASEOUS MATERIAL
GREEN	SEWERS AND DRAIN LINES
BLUE	POTABLE WATER
PURPLE	RECLAIMED WATER, IRRIGATION, AND SLURRY LINES
WHITE	PROPOSED EXCAVATION

TRANSPORTATION PROJECT/WORK WITHIN THE RIGHT-OF-WAY UTILITIES

UNDERGROUND VDOT OWNED/MAINTAINED UTILITIES

1. UNDERGROUND VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) OWNED AND/OR MAINTAINED UTILITIES MAY BE PRESENT WITHIN THE PROJECT LIMITS. THESE UTILITIES MAY INCLUDE POWER, COMMUNICATION OR OTHER UTILITIES RELATED TO STREET/PEDESTRIAN LIGHTING, INTELLIGENT TRAFFIC SYSTEM (ITS) DEVICES SUCH AS VARIABLE MESSAGE SIGNS (VMS), TRAFFIC SIGNALS AND OTHER RELATED FACILITIES.
2. FAIRFAX COUNTY HAS ATTEMPTED TO SHOW ANY KNOWN UNDERGROUND VDOT OWNED OR MAINTAINED UTILITIES ON THE PLANS BASED UPON THE BEST AVAILABLE INFORMATION AT THE TIME OF DESIGN.
3. MISS UTILITY DOES NOT AND WILL NOT MARK THE LOCATION OF UNDERGROUND VDOT OWNED AND/OR MAINTAINED UTILITIES WITHIN THE PROJECT AREA.

[HTTP://WWW.VDOTUTILITYMARKING.VIRGINIA.GOV/ACCOUNT/LOGIN.ASPX?RETURNURL=%2F](http://www.vdotutilitymarking.virginia.gov/account/login.aspx?returnurl=%2F)
4. AT LEAST 48 BUSINESS DAY HOURS IN ADVANCE OF ANY EXCAVATION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REQUESTING THAT VDOT MARK THEIR UNDERGROUND UTILITIES IN THE FIELD. ALL REQUESTS SHALL BE SUBMITTED THROUGH THE ONLINE "UTILITY MARKING SYSTEM" BY REGISTERING AT THE FOLLOWING WEBSITE:
5. THE 48 HOUR TIME LIMIT DOES NOT BEGIN UNTIL 7 AM THE BUSINESS DAY FOLLOWING RECEIPT OF THE UTILITY LOCATION REQUEST BY VDOT. STATE HOLIDAY AND WEEKENDS ARE NOT CONSIDERED TO BE BUSINESS DAYS. UNDERGROUND VDOT UTILITY LOCATION REQUESTS RECEIVED AFTER 4:30 PM SHALL BE CONSIDERED TO BE RECEIVED BY VDOT ON THE NEXT BUSINESS DAY.
6. NO EXCAVATION SHALL COMMENCE UNTIL THE UNDERGROUND VDOT UTILITIES HAVE BEEN MARKED.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OR REPLACEMENT OF UNDERGROUND VDOT OWNED/MAINTAINED UTILITIES THAT ARE DAMAGED DUE TO CONSTRUCTION OPERATIONS AT NO COST TO THE COUNTY.

UTILITY RELOCATION PLANS

1. FAIRFAX COUNTY HAS COORDINATED THE PROPOSED IMPROVEMENTS WITH THE OWNERS OF ALL KNOWN UNDERGROUND UTILITIES IN THE PROJECT AREA.
2. UNDERGROUND UTILITY TEST HOLE INFORMATION, NOTING THE HORIZONTAL AND VERTICAL LOCATION OF KNOWN UNDERGROUND UTILITIES THAT ARE IN POTENTIAL CONFLICT WITH THE PROJECT, MAY BE INCLUDED IN THE PLAN SET OR PROVIDED TO THE CONTRACTOR AT THE PRE-CONSTRUCTION CONFERENCE, OR UPON REQUEST FOLLOWING AWARD OF THE CONSTRUCTION CONTRACT.
3. WHERE UNDERGROUND UTILITIES ARE IN CONFLICT WITH THE PROJECT, FAIRFAX COUNTY OFTEN ATTEMPTS TO RELOCATE CONFLICTING UTILITIES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES. HOWEVER, AS WITH ALL CONSTRUCTION ACTIVITIES, EXTREME CARE SHALL BE TAKEN BY THE CONTRACTOR TO ENSURE UTILITY LOCATIONS ARE KNOWN PRIOR TO EXCAVATION.
4. MISS UTILITY MAY NOT HAVE THE MOST RECENT UP TO DATE INFORMATION CONCERNING UNDERGROUND UTILITIES THAT MAY HAVE BEEN RECENTLY RELOCATED PRIOR TO CONSTRUCTION.
5. FAIRFAX COUNTY MAY PROVIDE AVAILABLE PLANS SHOWING THE APPROXIMATE LOCATION OF RECENTLY RELOCATED UNDERGROUND UTILITIES TO THE CONTRACTOR AT THE PRE-CONSTRUCTION CONFERENCE, OR UPON REQUEST FOLLOWING AWARD OF THE CONSTRUCTION CONTRACT. WHERE PRACTICABLE, THE UTILITY RELOCATION PLANS MAY BE INCLUDED IN THE BID DOCUMENTS.
6. ANY KNOWN UNDERGROUND UTILITIES THAT ARE IN CONFLICT WITH THE PROJECT THAT ARE SCHEDULED TO BE RELOCATED DURING CONSTRUCTION SHALL BE AS NOTED ON THE PLANS AND/OR SPECIAL PROVISIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THESE RELOCATIONS WITH THE APPROPRIATE UTILITY COMPANY.

**FOR ALL EXCAVATION WORK ANYWHERE IN VIRGINIA!
 ALWAYS CALL 811 BEFORE YOU DIG IN VIRGINIA!**

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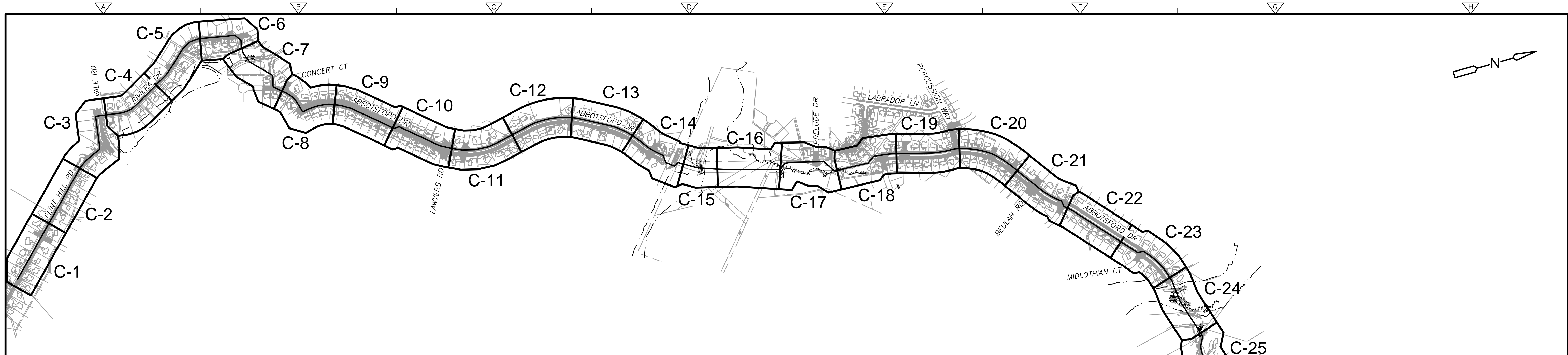
DESIGNED BY: G. THOMAS
 DRAWN BY: C. MILLER
 SHEET CHK'D BY: J. KUNAY
 CROSS CHK'D BY: _____
 APPROVED BY: _____
 DATE: AUGUST 2024



FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

GENERAL NOTES II

PROJECT NO. 5003-244105
 FILE NAME: G004NFNT.DWG
 SHEET NO.
G-4



PLAN
1" = 500'

SURVEY NOTES

RINKER DESIGN ASSOCIATES SURVEY NOTES:

- THE LAND BOUNDARY INFORMATION SHOWN ON THIS DRAWING WAS COMPILED FROM EXISTING LAND RECORDS AND DOES NOT REPRESENT A BOUNDARY SURVEY. BEARING LINES SHOWN IN PARENTHESIS ARE PLAT BEARINGS AND ARE NOT NECESSARILY PROJECT BEARINGS. NOT ALL EASEMENTS MAY BE SHOWN.
- THIS SITE SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF RINKER DESIGN ASSOCIATES, P.C. FROM AN ACTUAL AERIAL SURVEY BY QUANTUM SPATIAL; THAT THE IMAGERY AND OTHER DATA WAS OBTAINED ON MARCH 3, 2021, AND THAT THIS DIGITAL GEOSPATIAL DATA, INCLUDING METADATA, MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED. SUPPLEMENTAL GROUND SURVEY COLLECTED FROM AUGUST 2021 THROUGH FEBRUARY 2022 AND DECEMBER OF 2022.

ADDITIONAL SITE SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF RINKER DESIGN ASSOCIATES, P.C. FROM AN ACTUAL GROUND SURVEY MADE UNDER MY SUPERVISION; THAT THE IMAGERY AND OTHER DATA WAS OBTAINED ON DECEMBER 12, 2023, AND THAT THIS DIGITAL GEOSPATIAL DATA, INCLUDING METADATA, MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.
- HORIZONTAL DATUM: VCS 1983 - NORTH ZONE
VERTICAL DATUM: NGVD29
CONTOUR INTERVAL: 1 FOOT
- SANITARY MANHOLE LOCATIONS ARE SHOWN TO THE CENTER OF THE STRUCTURE, NOT TO THE CENTER OF THE LID.

SAM SUBSURFACE UTILITY ENGINEERING NOTES:

- ALL UTILITY INFORMATION HEREON IS DEPICTED TO QUALITY LEVEL "B" (QL-B) UNLESS OTHERWISE NOTED. QL-B INFORMATION IS OBTAINED THROUGH THE APPLICATION OF APPROPRIATE SURFACE GEOPHYSICAL METHODS TO IDENTIFY THE EXISTENCE AND APPROXIMATE HORIZONTAL POSITION OF SUBSURFACE UTILITIES. QL-B DATA ARE REPRODUCIBLE BY SURFACE GEOPHYSICS AT ANY POINT OF THEIR DEPICTION. THIS INFORMATION IS SURVEYED TO APPLICABLE TOLERANCES AND REDUCED ONTO PLAN DOCUMENTS.
- SIZE INFORMATION SHOWN HEREON IS TAKEN FROM AVAILABLE UTILITY RECORDS.
- UNLESS OTHERWISE NOTED, UTILITY LINE LIMITS DEPICTED REPRESENT FIELD DESIGNATING LIMITS AND NOT ENDPOINTS OF UTILITIES.
- UTILITY INFORMATION THAT IS LABELED "QL-C" OR "QL-D" IS DERIVED FROM FURNISHED RECORDS. SUCH INFORMATION MAY NOT BE ACCURATE OR RELIABLE. SAM, LLC EXPRESSLY DISCLAIMS RESPONSIBILITY FOR THE ACCURACY OR RELIABILITY OF UTILITY INFORMATION THAT IS DEPICTED ACCORDING TO RECORDS.
- PLEASE NOTE THAT THIS PROJECT WAS COMPLETED WITHOUT VERIZON RECORDS. THESE RECORDS WERE REQUESTED IN A TIMELY MANNER BUT THEY HAVE NOT BEEN MADE AVAILABLE TO SAM, LLC. ACCORDINGLY, SAM, LLC MUST DISCLAIM ANY LIABILITY RELATED TO THE INFORMATION DEPICTED ON THESE RECORDS AND TO THE OMISSION OF THIS INFORMATION FROM SAM, LLC'S WORK PRODUCT. IF THESE RECORDS ARE RECEIVED, AND AFTER SAM, LLC'S REVIEW OF THEM WE DETERMINE CHANGES IN THIS SUBMISSION, SAM, LLC WILL IMMEDIATELY CONTACT CDM SMITH FOR FURTHER INSTRUCTIONS ON HOW TO PROCEED AT THAT POINT.

SURVEY CONTROL

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION	POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	7025452.298	11840907.256	363.97	GPSM	48	7019168.302	11831878.44	317.55	TRV
2	7025207.947	11840676.964	369.25	GPSM	49	7018955.226	11831671.587	316.72	TRV
3	7024880.884	11840224.688	382.39	TRV	50	7018773.449	11831656.542	308.88	TRV
4	7024549.263	11840327.131	385.29	TRV	51	7018580.784	11831418.494	305.7	TRV
5	7024245.188	11840556.019	385.81	TRV	52	7018352.101	11831236.966	296.07	TRV
6	7023848.82	11840720.319	396.71	TRV	53	7018170.853	11831288.061	308.34	TRV
7	7023494.164	11841004.634	404.71	TRV	54	7018048.807	11831285.266	325.55	TRV
8	7023429.324	11840658.337	392.37	TRV	55	7017848.018	11831195.933	290.65	TRV
9	7023276.988	11840253.186	382.93	TRV	56	7017694.264	11831157.532	329.98	TRV
10	7023074.452	11840014.261	383.58	TRV	57	7017563.616	11831040.058	337.3	TRV
11	7022825.441	11840178.543	388.03	TRV	58	7017382.059	11830857.562	343.4	TRV
12	7022545.425	11840334.402	386.6	TRV	59	7017149.096	11830557.05	374.02	TRV
13	7022268.931	11840138.089	379.78	TRV	60	7016859.605	11830355.59	390.67	TRV
14	7022046.127	11839854.456	385.68	TRV	61	7016459.746	11830238.299	402.54	TRV
15	7021838.007	11839701.711	384.23	TRV	62	7016060.913	11830269.182	390.92	TRV
16	7021643.576	11839866.49	388.49	TRV	63	7015731.379	11830220.136	377.17	TRV
17	7021431.76	11839548.754	406.88	TRV	64	7015510.285	11830020.117	385.6	TRV
18	7021112.099	11839502.021	408.76	TRV	65	7015285.329	11829785.029	395.18	TRV
19	7021214.746	11839067.549	389.88	TRV	66	7015016.356	11829481.99	394.17	TRV
20	7021231.98	11838736.385	383.68	GPSM	67	7014711.169	11829259.562	382.75	TRV
21	7020903.511	11838471.188	385.39	GPSM	68	7014382.963	11829105.046	380.78	TRV
22	7020989.857	11838135.376	390.04	TRV	69	7014180.067	11828806.68	360.48	TRV
23	7021273.585	11837707.155	415.53	TRV	70	7014215.035	11828515.416	346.81	TRV
24	7021394.389	11837347.303	400.5	TRV	71	7013975.856	11828463.844	350.6	TRV
25	7021682.174	11836859.611	403.68	TRV	72	7014051.279	11828211.401	367.08	TRV
26	7021738.087	11836488.411	412.69	TRV	73	7013794.524	11828085.231	382.14	TRV
27	7021840.963	11836179.34	415.75	TRV	74	7013571.27	11828070.146	384.53	TRV
28	7021855.564	11835702.038	414	TRV	75	7013346.171	11828157.472	378.76	TRV
29	7021845.631	11835361.408	385.62	TRV	76	7013124.129	11828287.231	385.49	TRV
30	7021815.672	11835179.415	370.89	TRV	77	7012766.466	11828427.505	381.76	TRV
31	7021811.584	11834964.4	357.68	TRV	78	7012441.738	11828410.65	396.87	TRV
32	7021892.755	11834665.333	334.26	TRV	79	7012318.12	11828649.57	392.39	GPSM Adjusted
33	7021822.618	11834387.892	333.4	TRV	80	7011918.497	11828830.493	413.93	GPSM
34	7021830.838	11834281.975	352.37	TRV	81	7011619.637	11829108.702	417.21	TRV
35	7021719.664	11833960.611	368.32	TRV	82	7011354.909	11829268.323	423.3	TRV
36	7021496.678	11833670.787	387.21	TRV	83	7010966.752	11829613.585	432.71	TRV
37	7021317.468	11833553.638	384.86	TRV	84	7010652.319	11829822.935	422.31	TRV
38	7021113.537	11833083.198	393.56	TRV	85	7010429.076	11829925.839	418.58	TRV
39	7020930.148	11832901.836	414.98	TRV	86	7010070.976	11830011.195	415.11	TRV
40	7020816.732	11832615.626	403.83	TRV	87	7009744.25	11830153.467	422.27	TRV
41	7020620.433	11832330.333	380.71	TRV	88	7009612.734	11830363.618	411.17	TRV
42	7020361.191	11832169.143	363.76	TRV	89	7009853.565	11830648.171	408.28	TRV
43	7020330.09	11831763.295	375.73	GPSM Adjusted	90	7010167.63	11830888.552	399.75	TRV
44	7019937.029	11831566.701	365.98	GPSM	91	7010390.633	11831159.08	382.93	TRV
45	7019630.441	11831385.091	363.83	TRV	92	7010652.097	11831409.02	383.87	TRV
46	7019539.677	11831678.194	344.84	TRV	93	7010906.531	11831549.014	384.09	TRV
47	7019270.542	11831762.238	335.98	TRV	94	7011148.085	11831783.563	386.57	GPSM OLD 58 Adjusted

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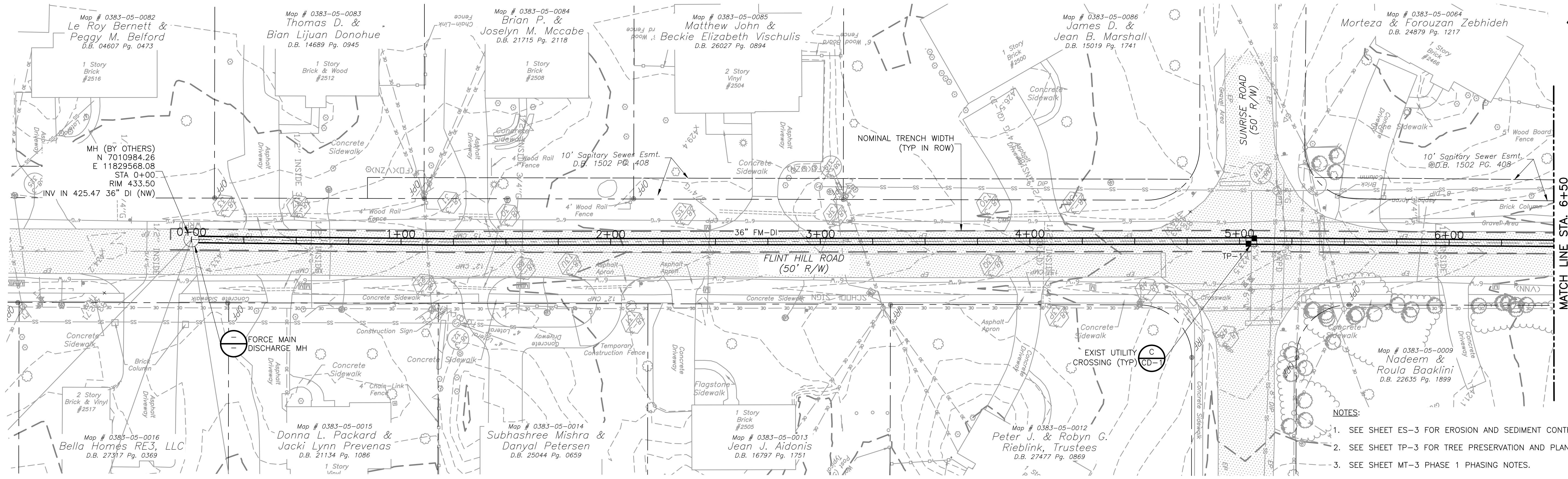
REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: <u>G. THOMAS</u>	<p>10306 Eaton Place, Suite 220 Fairfax, VA 22030 Tel: (703) 691-6500</p>
DRAWN BY: <u>C. MILLER</u>	
SHEET CHK'D BY: <u>J. KUNAY</u>	
CROSS CHK'D BY: _____	
APPROVED BY: _____	
DATE: <u>AUGUST 2024</u>	

FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

KEY MAP
 AND SURVEY NOTES
 SHEET NO.
G-5

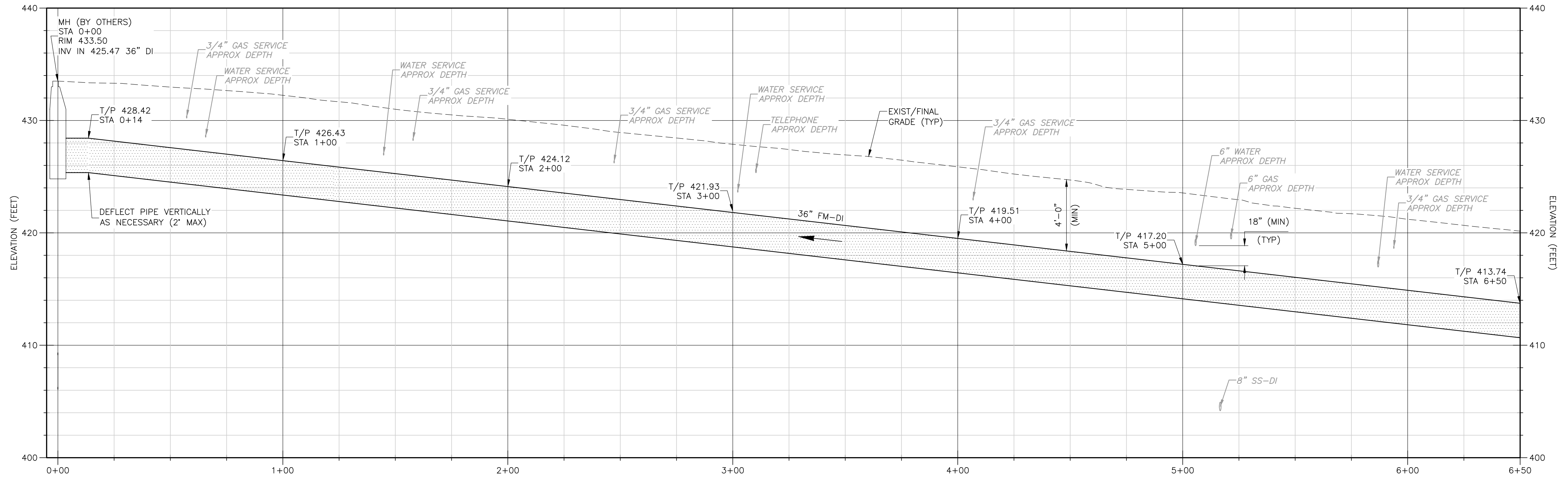
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SHEET NO. G-5



MATCH LINE STA. 6+50
SEE SHEET C-2 FOR CONTINUATION

- NOTES:**
1. SEE SHEET ES-3 FOR EROSION AND SEDIMENT CONTROL PLAN.
 2. SEE SHEET TP-3 FOR TREE PRESERVATION AND PLANTING PLAN.
 3. SEE SHEET MT-3 PHASE 1 PHASING NOTES.

PLAN
1" = 25'



PROFILE
HORIZONTAL: 1" = 25'
VERTICAL: 1" = 5'

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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: G. THOMAS
DRAWN BY: C. MILLER
SHEET CHK'D BY: J. KUNAY
CROSS CHK'D BY: _____
APPROVED BY: _____
DATE: AUGUST 2024

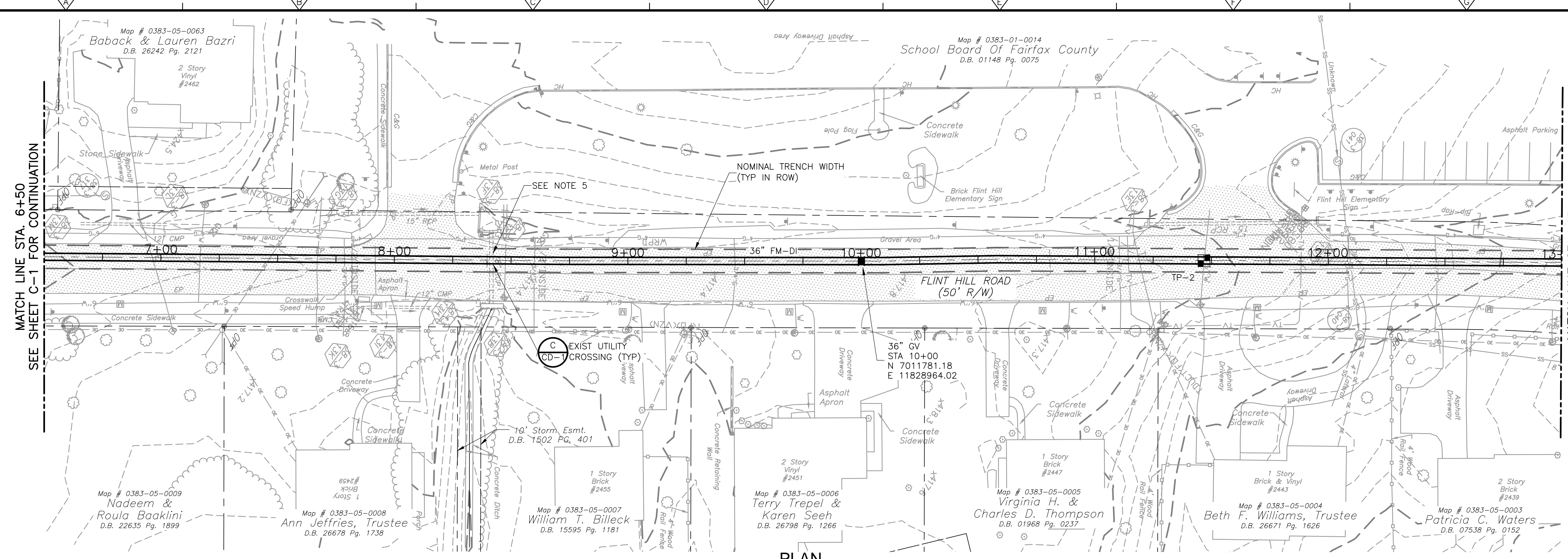


FAIRFAX COUNTY, VIRGINIA
DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
TYSONS WASTEWATER CONVEYANCE SYSTEM
MODIFICATIONS
PACKAGE 4: FORCE MAIN

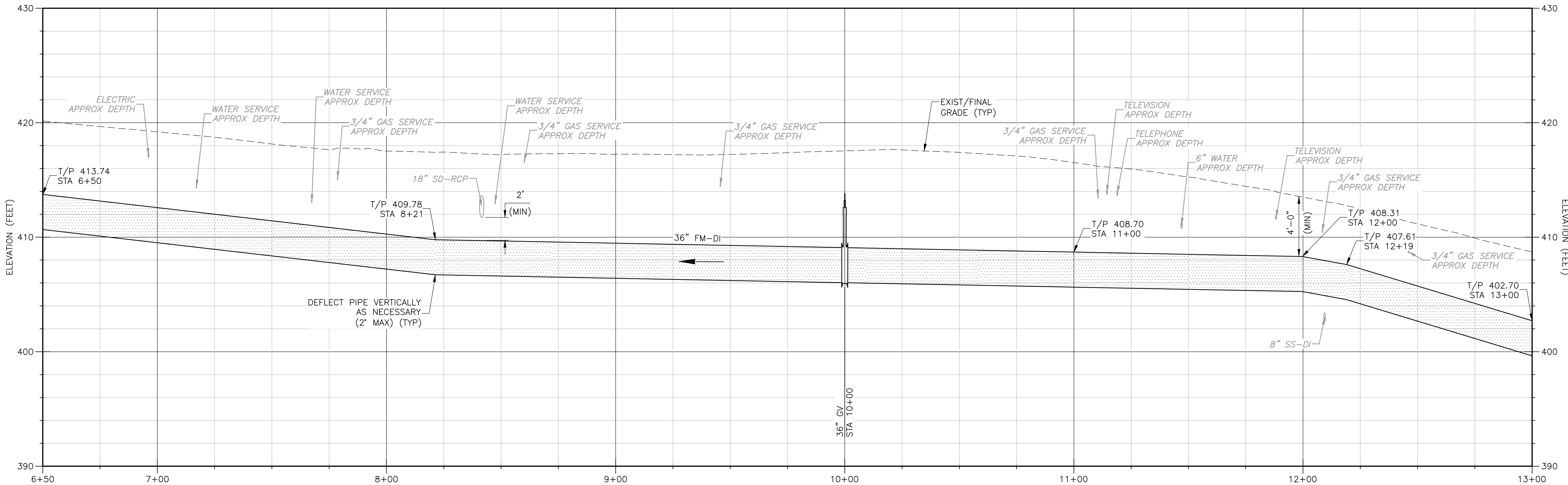
**FLINT HILL ROAD
PLAN AND PROFILE
STA 0+00 TO STA 6+50**

PROJECT NO. 5003-244105
FILE NAME: C001FMPP.DWG
SHEET NO. C-1

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PLAN
1" = 25'



PROFILE
HORIZONTAL: 1" = 25'
VERTICAL: 1" = 5'

MATCH LINE STA. 13+00
SEE SHEET C-3 FOR CONTINUATION

NOTES:

1. CONTRACTOR TO COORDINATE WITH SCHOOL SCHEDULE FOR WORK TO BE PERFORMED WHEN SCHOOL IS NOT IN SESSION OR COORDINATE INGRESS/EGRESS WHEN SCHOOL IS IN SESSION.
2. SEE SHEET ES-3 FOR EROSION AND SEDIMENT CONTROL PLAN.
3. SEE SHEET TP-4 FOR TREE PRESERVATION AND PLANTING PLAN.
4. SEE SHEET MT-3 PHASE 1 PHASING NOTES.
5. STORMWATER CROSSING TO BE SUPPORTED FROM ABOVE OR REMOVED AND REINSTALL UP TO TWO LENGTHS OF RCP.

REV. NO.	DATE	DRWN	CHKD	REMARKS

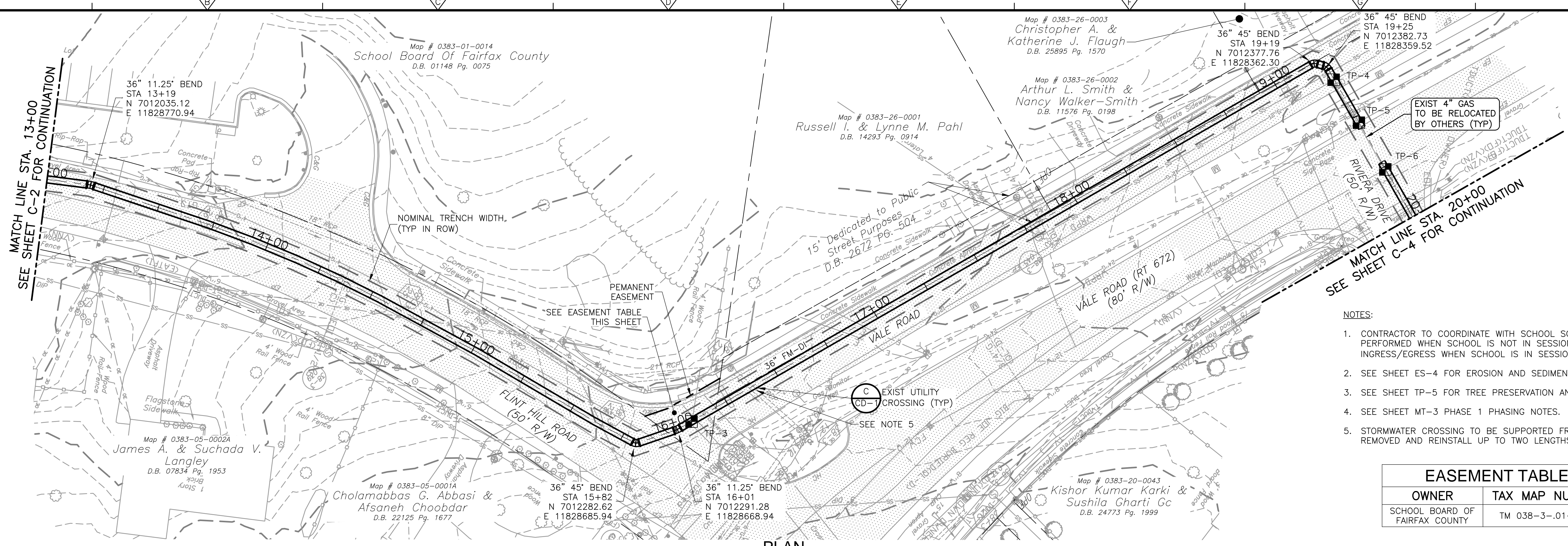
DESIGNED BY: G. THOMAS
 DRAWN BY: C. MILLER
 SHEET CHK'D BY: J. KUNAY
 CROSS CHK'D BY: _____
 APPROVED BY: _____
 DATE: AUGUST 2024



FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
MODIFICATIONS
 PACKAGE 4: FORCE MAIN

FLINT HILL ROAD
PLAN AND PROFILE
STA 6+50 TO STA 13+00

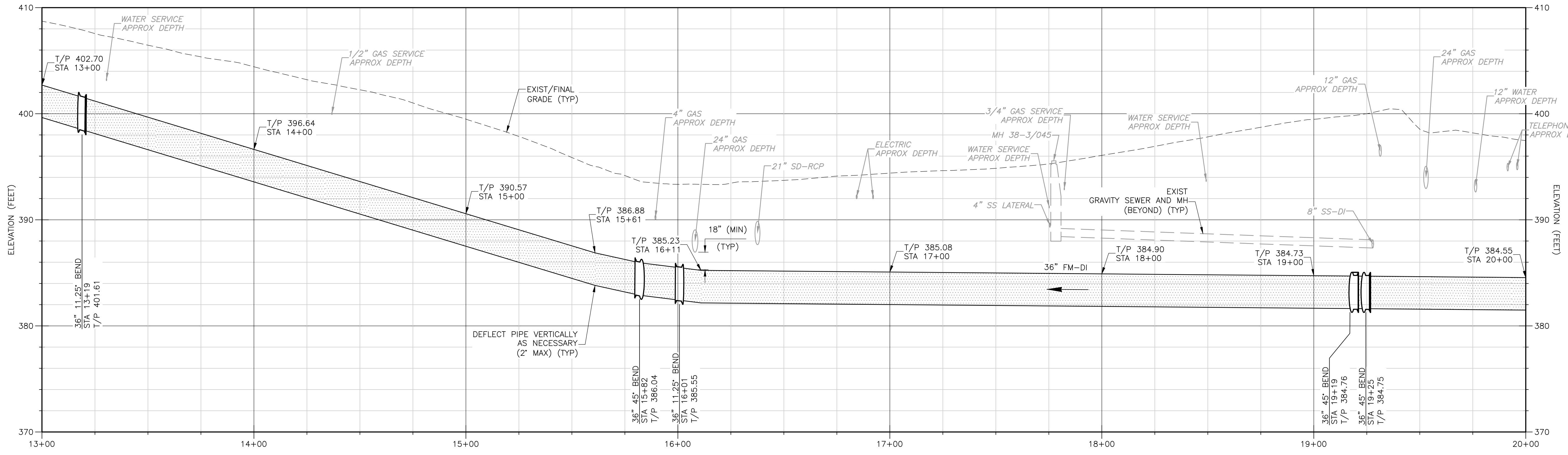
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 SHEET NO. **C-2**



PLAN
1" = 25'

- NOTES:
- CONTRACTOR TO COORDINATE WITH SCHOOL SCHEDULE TO BE PERFORMED WHEN SCHOOL IS NOT IN SESSION OR COORDINATE INGRESS/EGRESS WHEN SCHOOL IS IN SESSION.
 - SEE SHEET ES-4 FOR EROSION AND SEDIMENT CONTROL PLAN.
 - SEE SHEET TP-5 FOR TREE PRESERVATION AND PLANTING PLAN.
 - SEE SHEET MT-3 PHASE 1 PHASING NOTES.
 - STORMWATER CROSSING TO BE SUPPORTED FROM ABOVE OR REMOVED AND REINSTALL UP TO TWO LENGTHS OF RCP.

EASEMENT TABLE	
OWNER	TAX MAP NUMBER
SCHOOL BOARD OF FAIRFAX COUNTY	TM 038-3-.01-0014



PROFILE
HORIZONTAL: 1" = 25'
VERTICAL: 1" = 5'

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REV. NO.	DATE	DRWN	CHKD	REMARKS

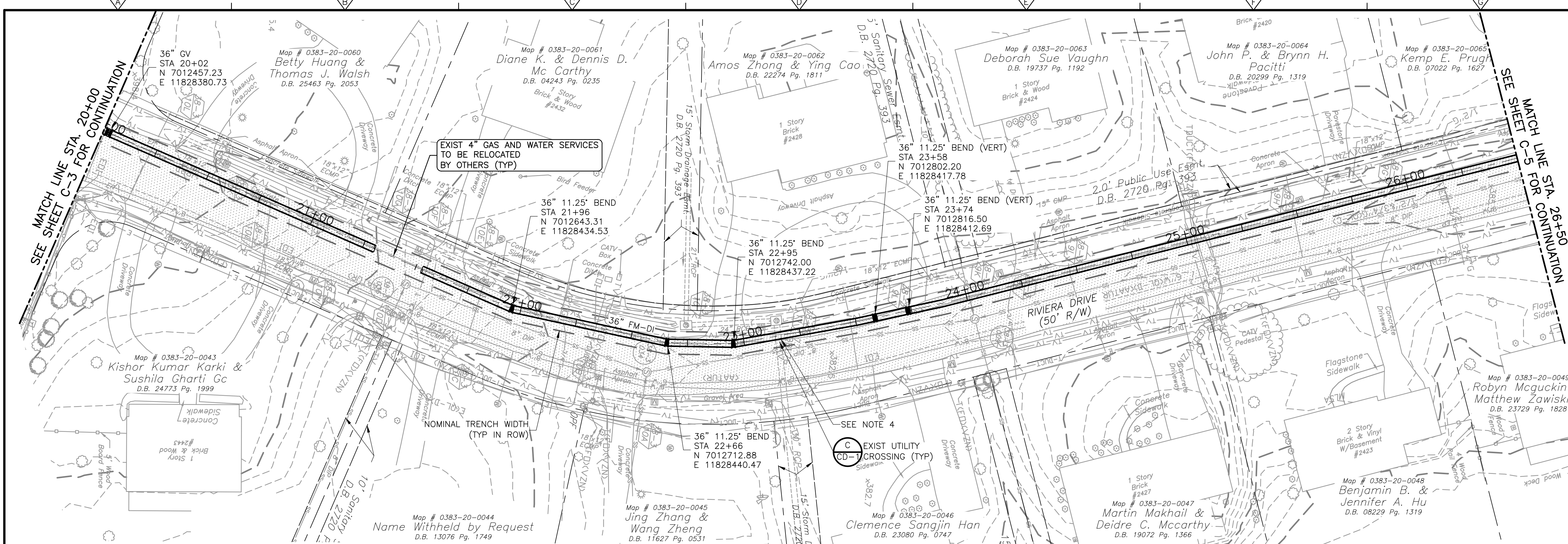
DESIGNED BY:	G. THOMAS
DRAWN BY:	C. MILLER
SHEET CHK'D BY:	J. KUNAY
CROSS CHK'D BY:	
APPROVED BY:	
DATE:	AUGUST 2024



FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

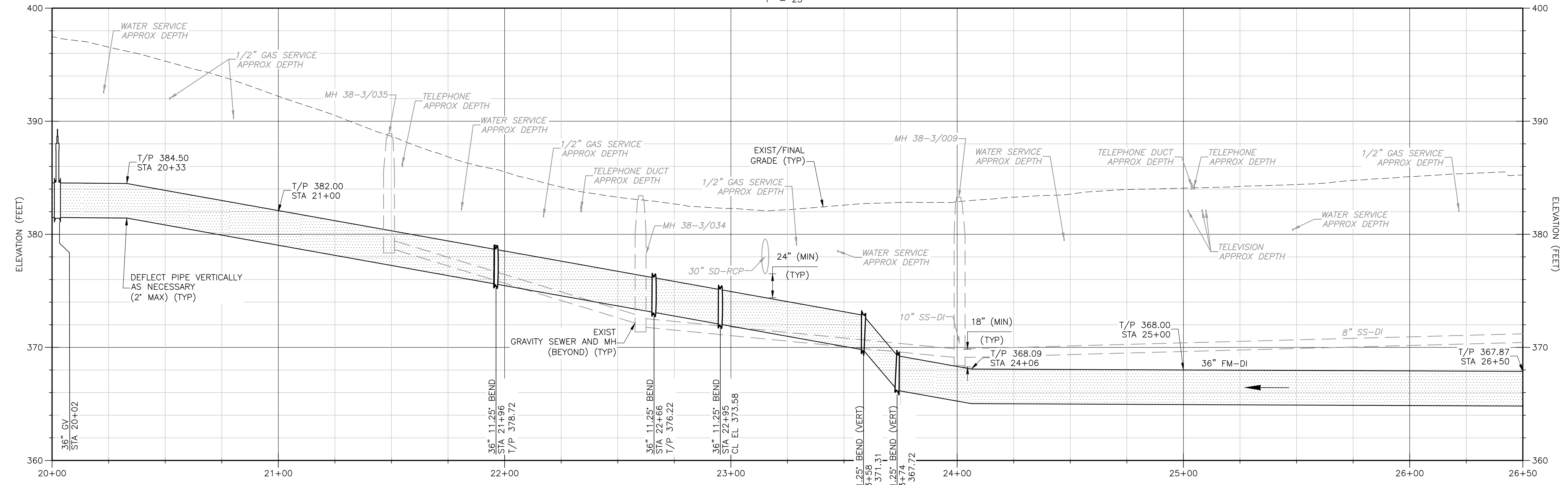
FLINT HILL ROAD AND VALE ROAD
 PLAN AND PROFILE
 STA 13+00 TO STA 20+00

PROJECT NO.	5003-244105
FILE NAME:	CO03FMPP.DWG
SHEET NO.	C-3



- NOTES:**
- SEE SHEET ES-4 FOR EROSION AND SEDIMENT CONTROL PLAN.
 - SEE SHEET TP-5 FOR TREE PRESERVATION AND PLANTING PLAN.
 - SEE SHEET MT-3 PHASE 1 PHASING NOTES.
 - STORMWATER CROSSING TO BE SUPPORTED FROM ABOVE OR REMOVED AND REINSTALL UP TO TWO LENGTHS OF RCP.

PLAN
1" = 25'



PROFILE
HORIZONTAL: 1" = 25'
VERTICAL: 1" = 5'

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY:	G. THOMAS
DRAWN BY:	C. MILLER
SHEET CHK'D BY:	J. KUNAY
CROSS CHK'D BY:	
APPROVED BY:	
DATE:	AUGUST 2024

CDM Smith
10306 Eaton Place, Suite 220
Fairfax, VA 22030
Tel: (703) 691-6500

FAIRFAX COUNTY, VIRGINIA
DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
TYSONS WASTEWATER CONVEYANCE SYSTEM
MODIFICATIONS
PACKAGE 4: FORCE MAIN

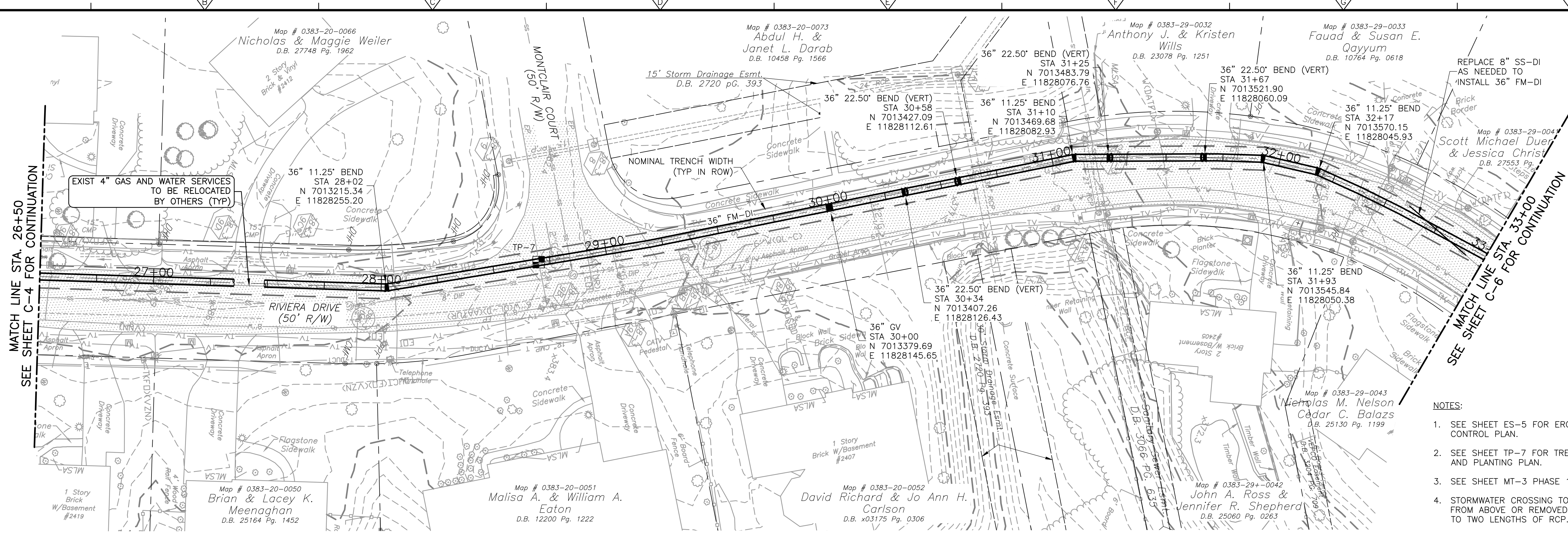
RIVIERA DRIVE
PLAN AND PROFILE
STA 20+00 TO STA 26+50

C-4

PROJECT NO.	5003-244105
FILE NAME:	C004FMPP.DWG
SHEET NO.	C-4

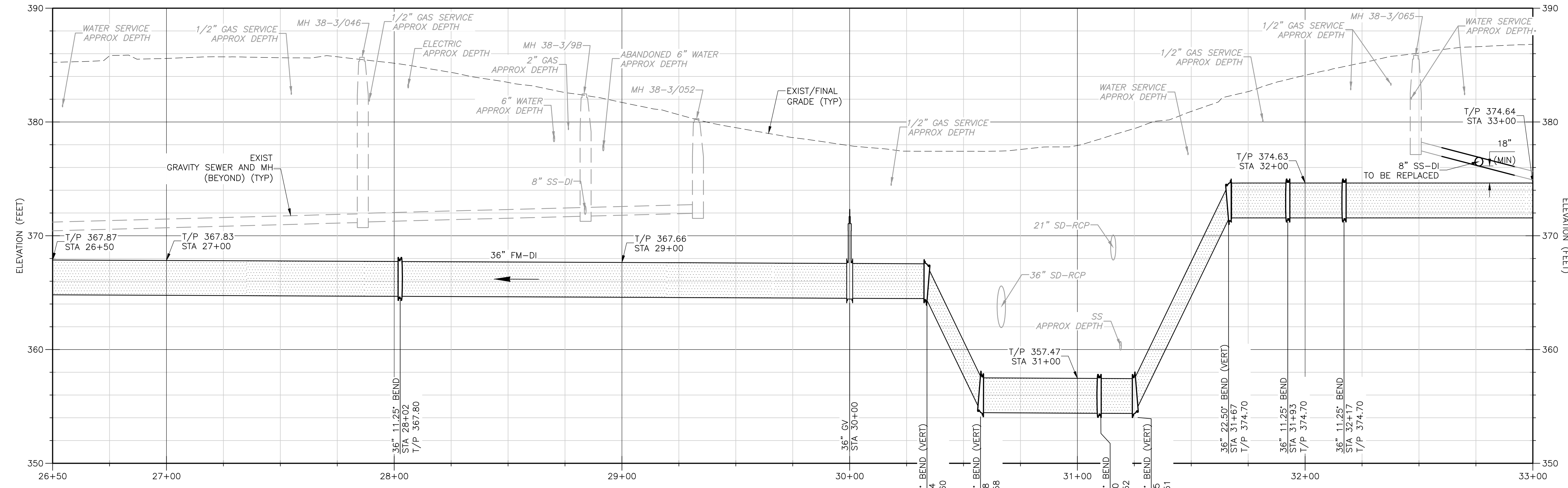
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PLAN
1" = 25'

- NOTES:**
- SEE SHEET ES-5 FOR EROSION AND SEDIMENT CONTROL PLAN.
 - SEE SHEET TP-7 FOR TREE PRESERVATION AND PLANTING PLAN.
 - SEE SHEET MT-3 PHASE 1 PHASING NOTES.
 - STORMWATER CROSSING TO BE SUPPORTED FROM ABOVE OR REMOVED AND REINSTALL UP TO TWO LENGTHS OF RCP.



PROFILE
HORIZONTAL: 1" = 25'
VERTICAL: 1" = 5'

REV. NO.	DATE	DRWN	CHKD	REMARKS

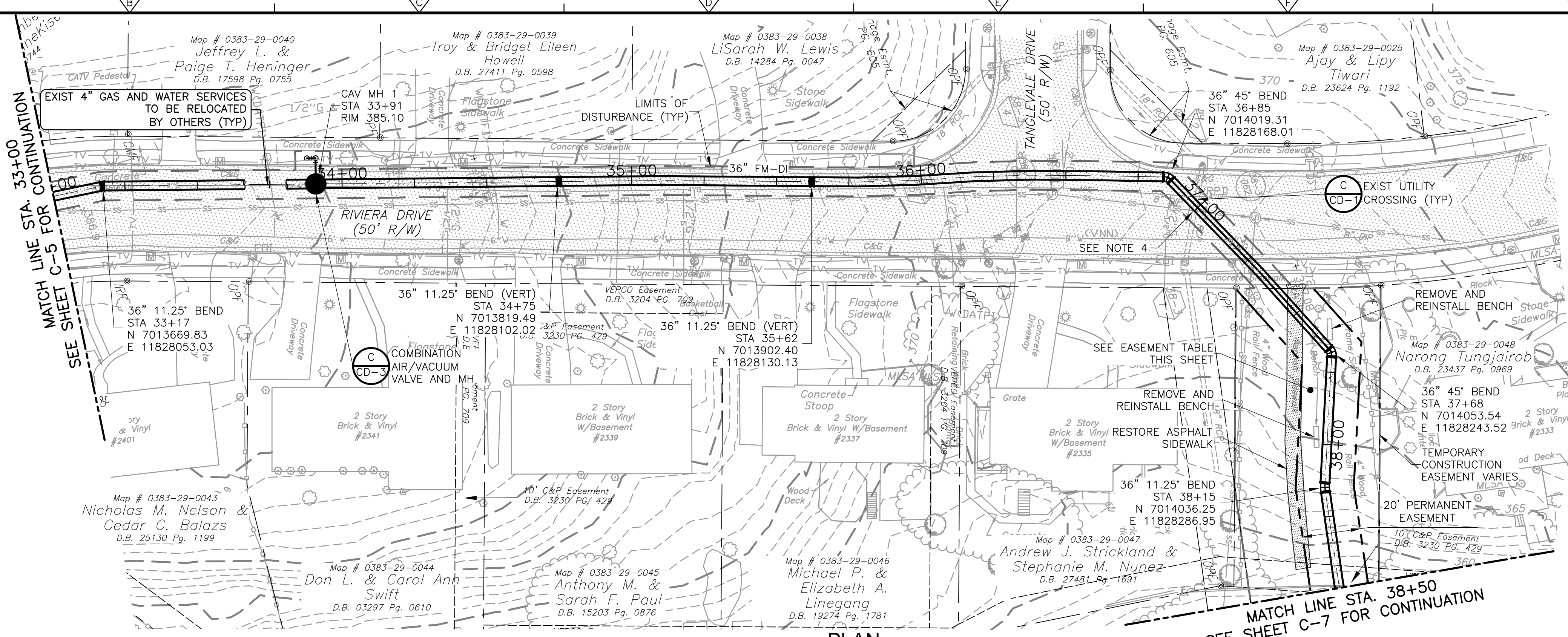
DESIGNED BY:	G. THOMAS
DRAWN BY:	C. MILLER
SHEET CHK'D BY:	J. KUNAY
CROSS CHK'D BY:	
APPROVED BY:	
DATE:	AUGUST 2024

CDM Smith
 10306 Eaton Place, Suite 220
 Fairfax, VA 22030
 Tel: (703) 691-6500

FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
MODIFICATIONS
 PACKAGE 4: FORCE MAIN

RIVIERA DRIVE
PLAN AND PROFILE
 STA 26+50 TO STA 33+00

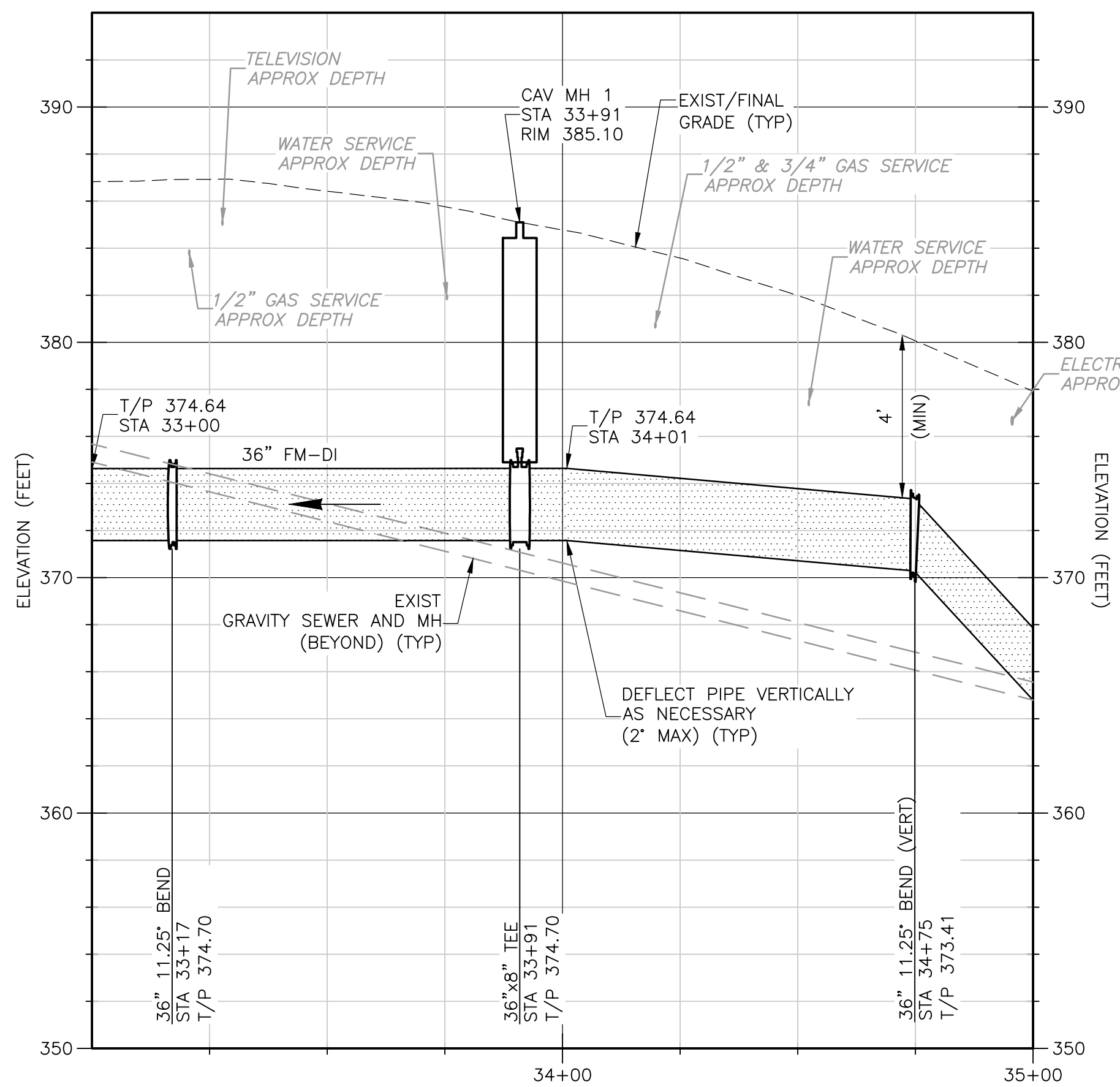
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SHEET NO.	C-5



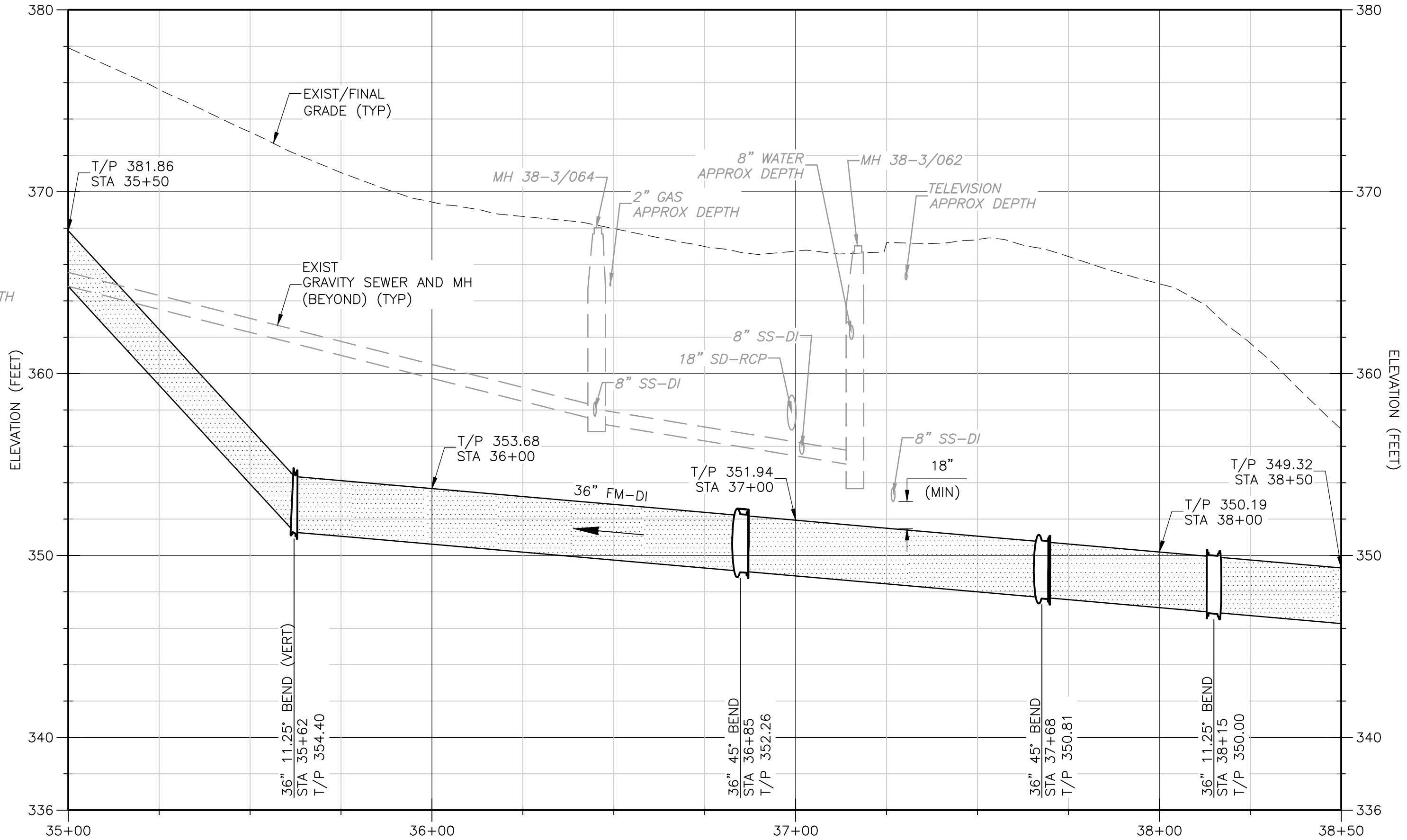
- NOTES:**
- SEE SHEET ES-5 FOR EROSION AND SEDIMENT CONTROL PLAN.
 - SEE SHEET TP-8 FOR TREE PRESERVATION AND PLANTING PLAN.
 - SEE SHEET MT-3 PHASE 1 PHASING NOTES.
 - STORMWATER CROSSING TO BE SUPPORTED FROM ABOVE OR REMOVED AND REINSTALL UP TO TWO LENGTHS OF RCP.

EASEMENT TABLE	
OWNER	TAX MAP NUMBER
TANGLEWOOD COMMUNITY ASSOCIATION	TM 038-3-29-A1

PLAN
1" = 25'



PROFILE
HORIZONTAL: 1" = 25'
VERTICAL: 1" = 5'



PROFILE
HORIZONTAL: 1" = 25'
VERTICAL: 1" = 5'

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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: G. THOMAS
 DRAWN BY: C. MILLER
 SHEET CHK'D BY: J. KUNAY
 CROSS CHK'D BY: _____
 APPROVED BY: _____
 DATE: AUGUST 2024

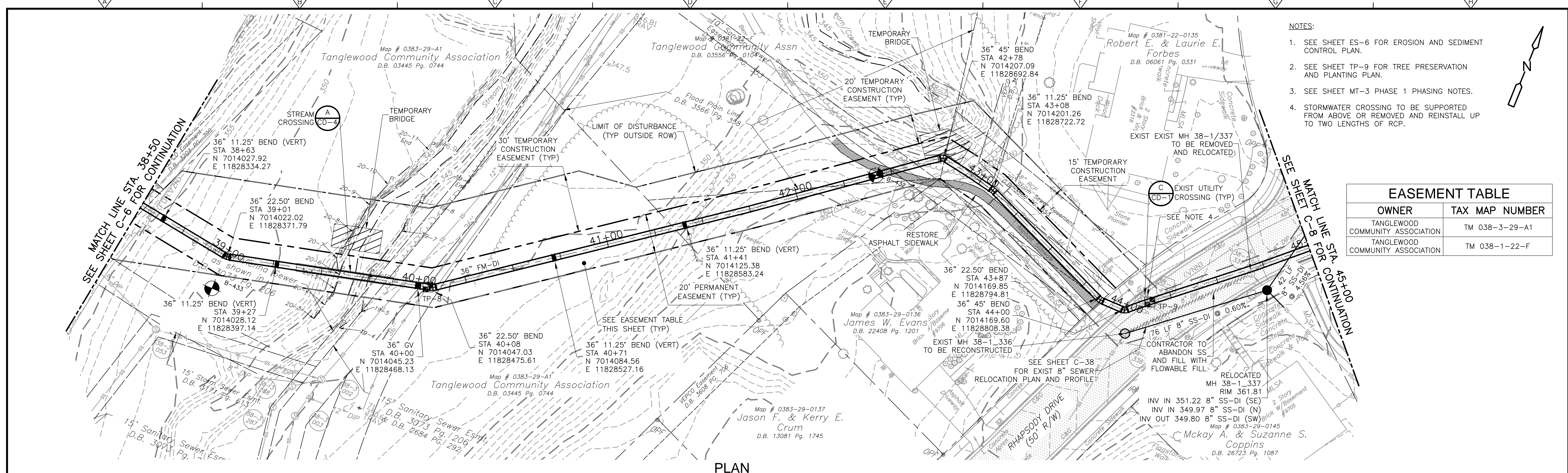


FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

RIVIERA DRIVE
 AND TANGLEWOOD COMMUNITY
 PLAN AND PROFILES
 STA 33+00 TO STA 38+50

PROJECT NO.	5003-244105
FILE NAME:	C006FMPP.DWG
SHEET NO.	C-6

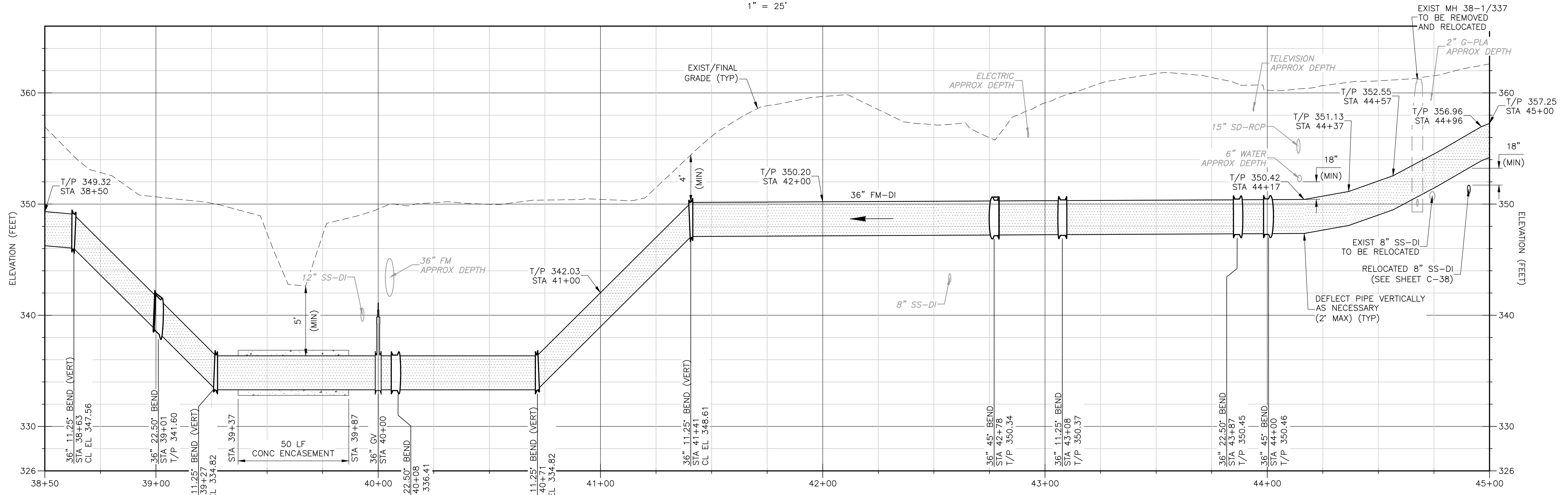
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- NOTES:**
- SEE SHEET ES-6 FOR EROSION AND SEDIMENT CONTROL PLAN.
 - SEE SHEET TP-9 FOR TREE PRESERVATION AND PLANTING PLAN.
 - SEE SHEET MT-3 PHASE 1 PHASING NOTES.
 - STORMWATER CROSSING TO BE SUPPORTED FROM ABOVE OR REMOVED AND REINSTALL UP TO TWO LENGTHS OF RCP.

EASEMENT TABLE	
OWNER	TAX MAP NUMBER
TANGLEWOOD COMMUNITY ASSOCIATION	TM 038-3-29-A1
TANGLEWOOD COMMUNITY ASSOCIATION	TM 038-1-22-F

PLAN
1" = 25'



PROFILE
HORIZONTAL: 1" = 25'
VERTICAL: 1" = 5'

REV. NO.	DATE	DRWN	CHKD	REMARKS

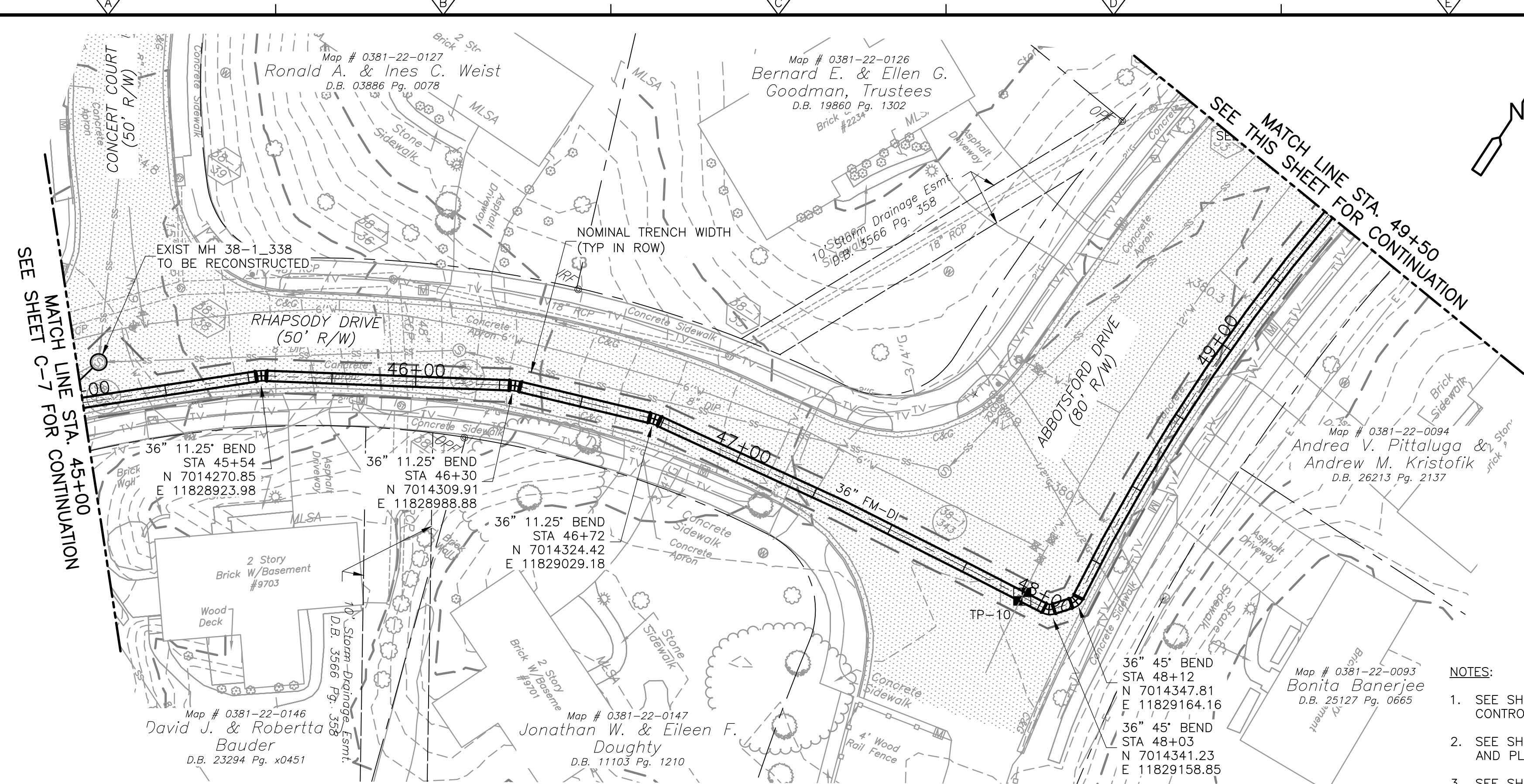
DESIGNED BY: G. THOMAS
 DRAWN BY: C. MILLER
 SHEET CHK'D BY: J. KUNAY
 CROSS CHK'D BY:
 APPROVED BY:
 DATE: AUGUST 2024



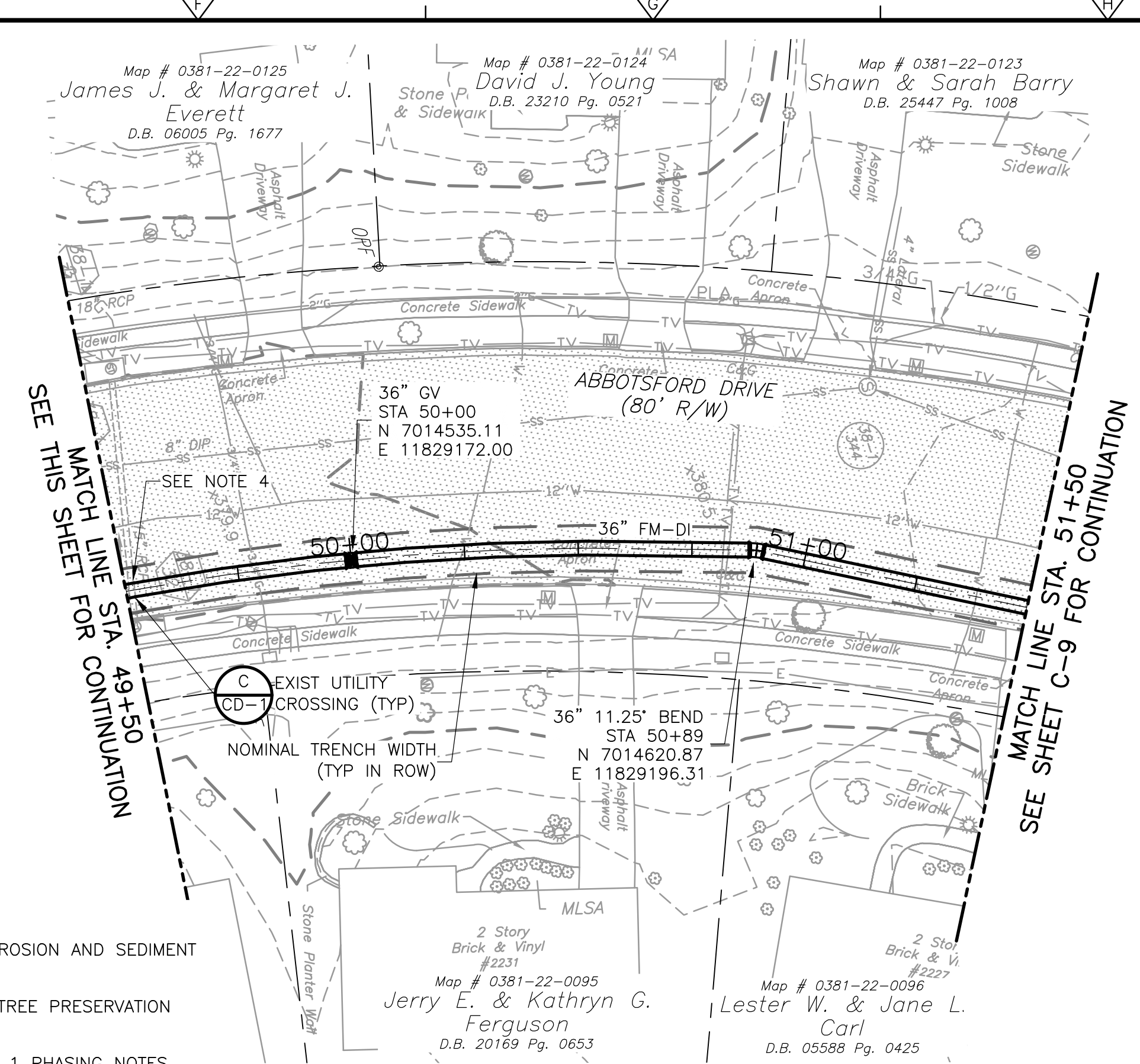
FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

TANGLEWOOD COMMUNITY
 AND RHAPSODY DRIVE
 PLAN AND PROFILE
 STA 38+50 TO STA 45+00

PROJECT NO.	5003-244105
FILE NAME:	CO07FMPP.DWG
SHEET NO.	C-7

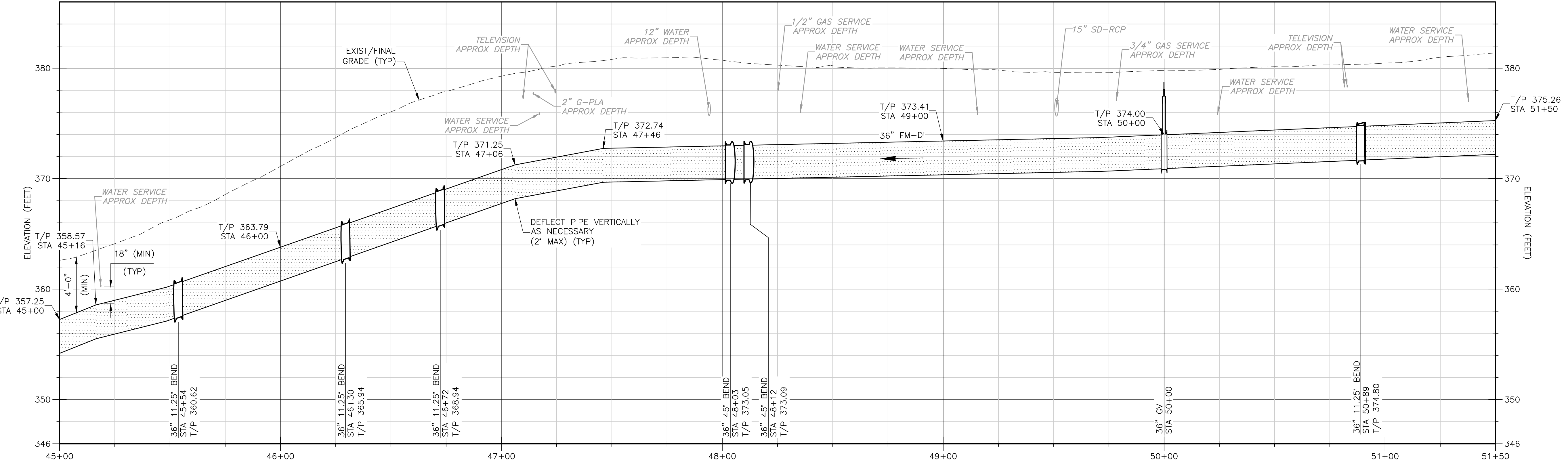


PLAN
1" = 25'



PLAN
1" = 25'

- NOTES:**
- SEE SHEET ES-6 FOR EROSION AND SEDIMENT CONTROL PLAN.
 - SEE SHEET TP-10 FOR TREE PRESERVATION AND PLANTING PLAN.
 - SEE SHEET MT-3 PHASE 1 PHASING NOTES.
 - STORMWATER CROSSING TO BE SUPPORTED FROM ABOVE OR REMOVED AND REINSTALL UP TO TWO LENGTHS OF RCP.



PROFILE
HORIZONTAL: 1" = 25'
VERTICAL: 1" = 5'

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REV. NO.	DATE	DRWN	CHKD	REMARKS

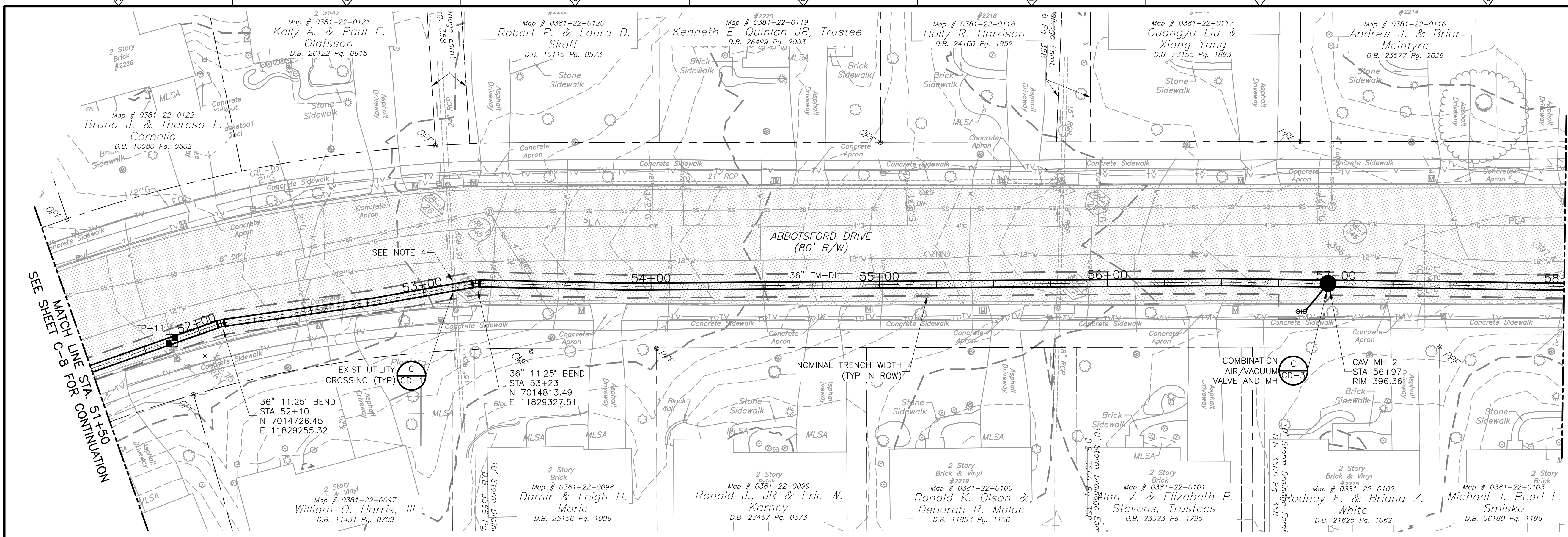
DESIGNED BY:	G. THOMAS
DRAWN BY:	C. MILLER
SHEET CHK'D BY:	J. KUNAY
CROSS CHK'D BY:	
APPROVED BY:	
DATE:	AUGUST 2024

CDM Smith
 10306 Eaton Place, Suite 220
 Fairfax, VA 22030
 Tel: (703) 691-6500

FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
MODIFICATIONS
 PACKAGE 4: FORCE MAIN

RHAPSODY DRIVE AND ABBOTSFORD DRIVE
PLANS AND PROFILE
STA 45+00 TO STA 51+50

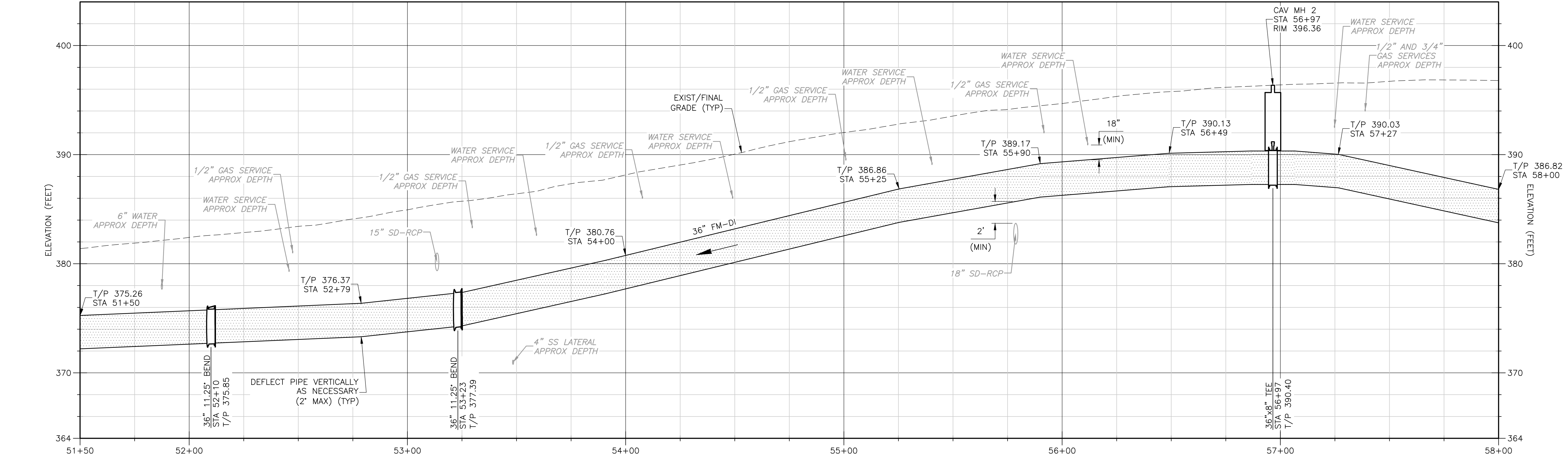
PROJECT NO.	5003-244105
FILE NAME:	CO08FMPP.DWG
SHEET NO.	C-8



PLAN
1" = 25'

MATCH LINE STA. 58+00
SEE SHEET C-10 FOR CONTINUATION

- NOTES:**
- SEE SHEET ES-7 FOR EROSION AND SEDIMENT CONTROL PLAN.
 - SEE SHEET TP-11 FOR TREE PRESERVATION AND PLANTING PLAN.
 - SEE SHEET MT-3 PHASE 1 PHASING NOTES.
 - STORMWATER CROSSING TO BE SUPPORTED FROM ABOVE OR REMOVED AND REINSTALL UP TO TWO LENGTHS OF RCP.



PROFILE
HORIZONTAL: 1" = 25'
VERTICAL: 1" = 5'

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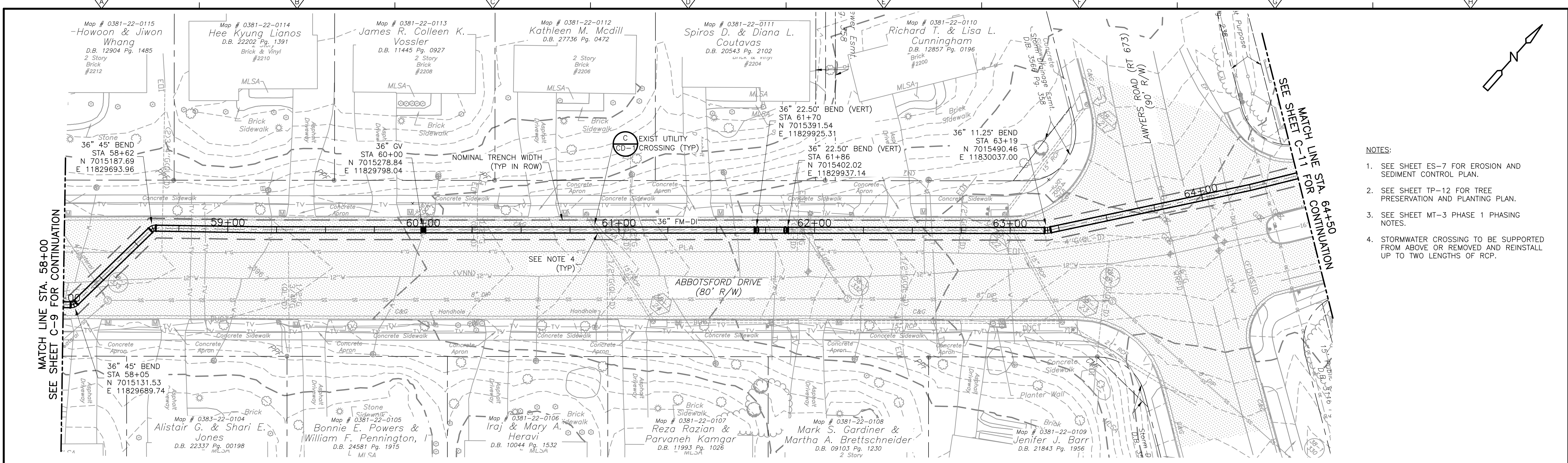
DESIGNED BY: G. THOMAS
DRAWN BY: C. MILLER
SHEET CHK'D BY: J. KUNAY
CROSS CHK'D BY: _____
APPROVED BY: _____
DATE: AUGUST 2024



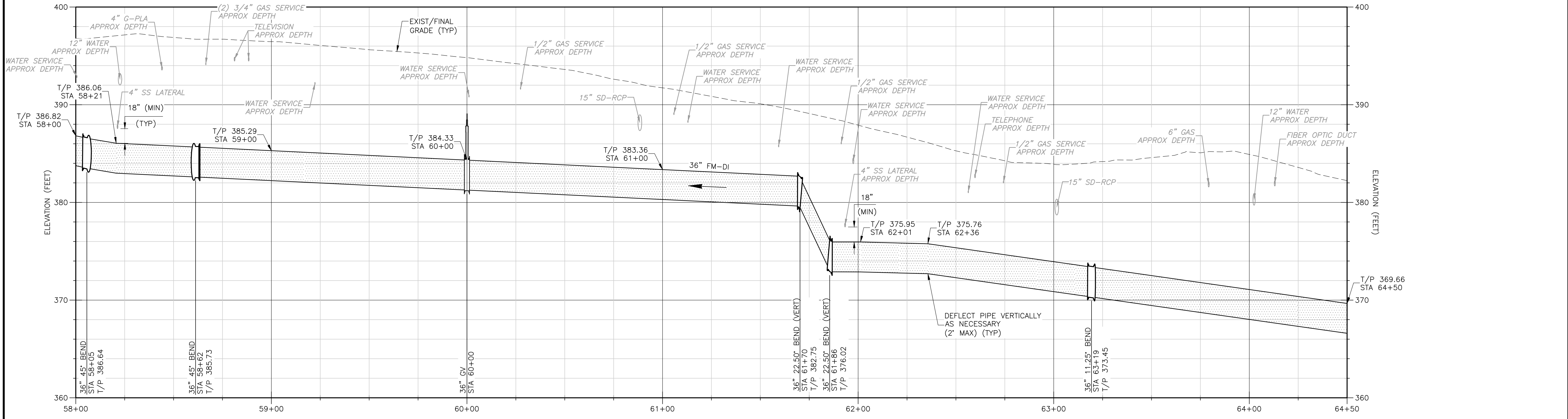
FAIRFAX COUNTY, VIRGINIA
DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
TYSONS WASTEWATER CONVEYANCE SYSTEM
MODIFICATIONS
PACKAGE 4: FORCE MAIN

ABBOTSFORD DRIVE
PLAN AND PROFILE
STA 51+50 TO STA 58+00

PROJECT NO. 5003-244105
FILE NAME: C009FMPP.DWG
SHEET NO. C-9



PLAN
1" = 25'



PROFILE
HORIZONTAL: 1" = 25'
VERTICAL: 1" = 5'

- NOTES:
- SEE SHEET ES-7 FOR EROSION AND SEDIMENT CONTROL PLAN.
 - SEE SHEET TP-12 FOR TREE PRESERVATION AND PLANTING PLAN.
 - SEE SHEET MT-3 PHASE 1 PHASING NOTES.
 - STORMWATER CROSSING TO BE SUPPORTED FROM ABOVE OR REMOVED AND REINSTALL UP TO TWO LENGTHS OF RCP.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: G. THOMAS
 DRAWN BY: C. MILLER
 SHEET CHK'D BY: J. KUNAY
 CROSS CHK'D BY: _____
 APPROVED BY: _____
 DATE: AUGUST 2024

CDM Smith
 10306 Eaton Place, Suite 220
 Fairfax, VA 22030
 Tel: (703) 691-6500

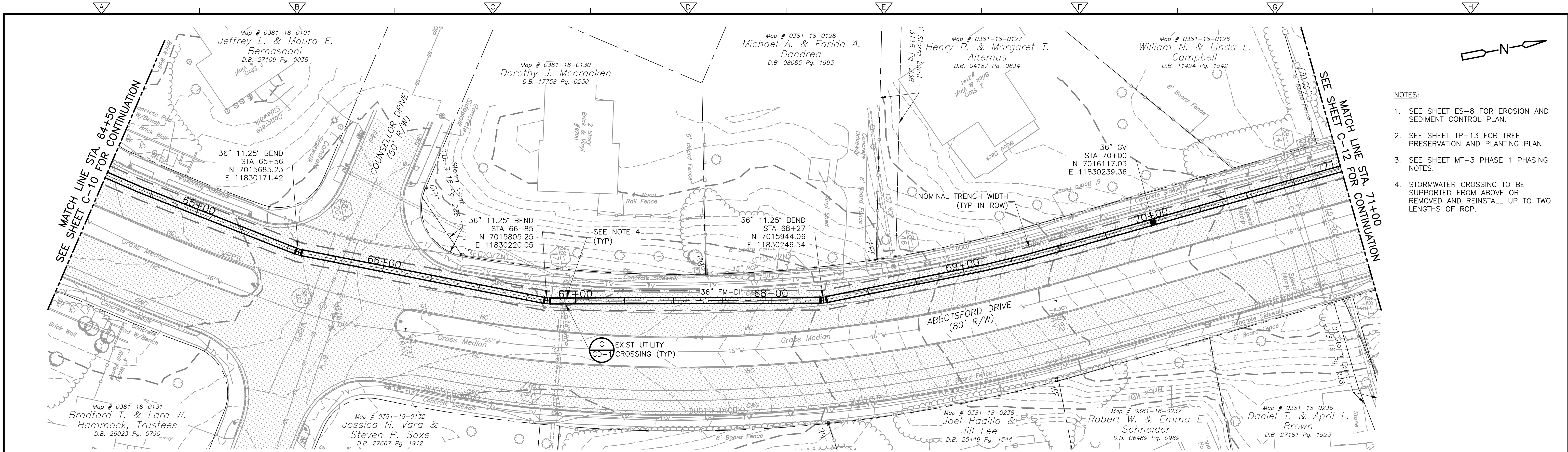
FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

ABBOTSFORD DRIVE
 PLAN AND PROFILE
 STA 58+00 TO STA 64+50

C-10

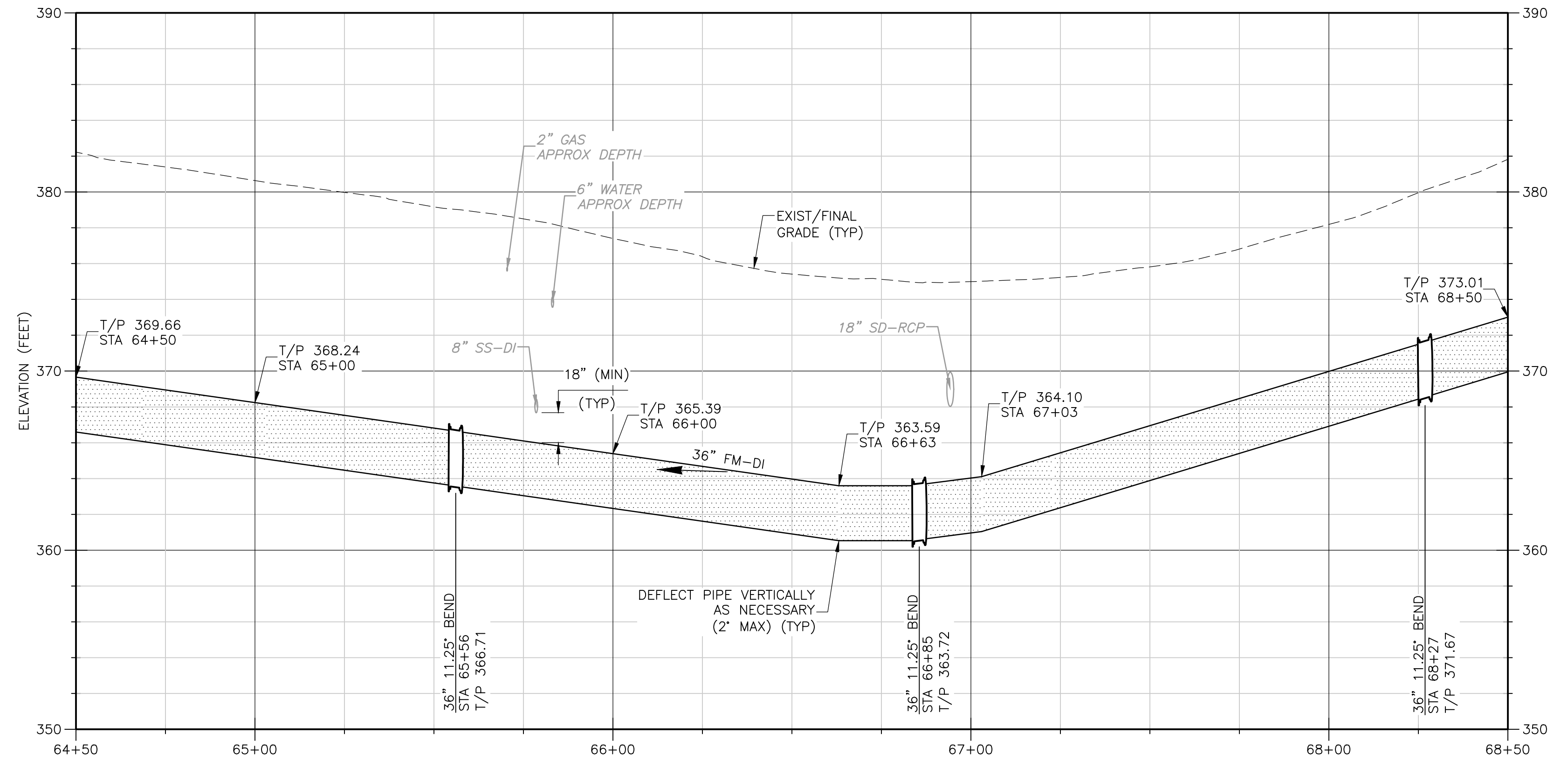
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 SHEET NO. C-10

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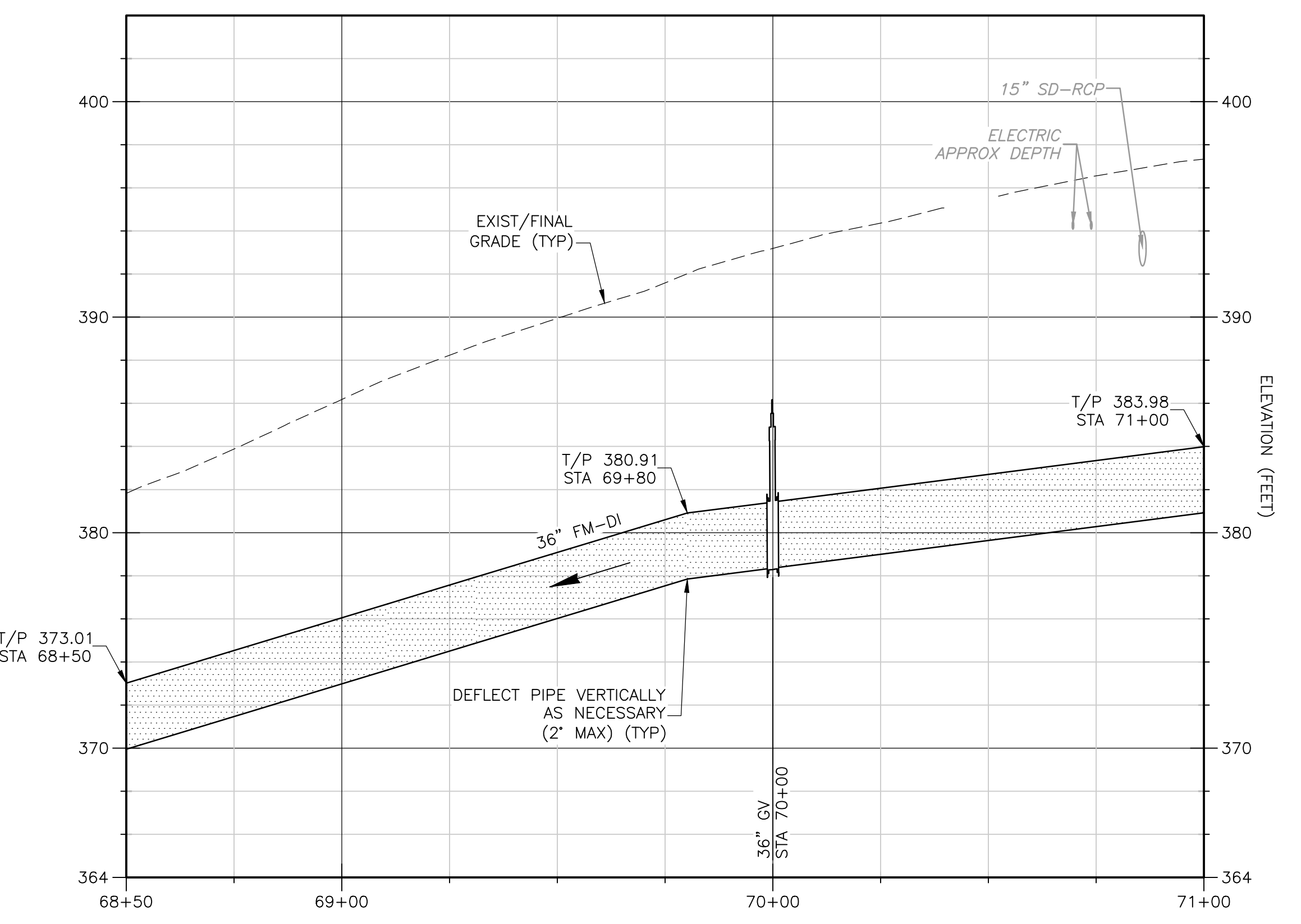


PLAN
1" = 25'

- NOTES:
- SEE SHEET ES-8 FOR EROSION AND SEDIMENT CONTROL PLAN.
 - SEE SHEET TP-13 FOR TREE PRESERVATION AND PLANTING PLAN.
 - SEE SHEET MT-3 PHASE 1 PHASING NOTES.
 - STORMWATER CROSSING TO BE SUPPORTED FROM ABOVE OR REMOVED AND REINSTALL UP TO TWO LENGTHS OF RCP.



PROFILE
HORIZONTAL: 1" = 25'
VERTICAL: 1" = 5'



PROFILE
HORIZONTAL: 1" = 25'
VERTICAL: 1" = 5'

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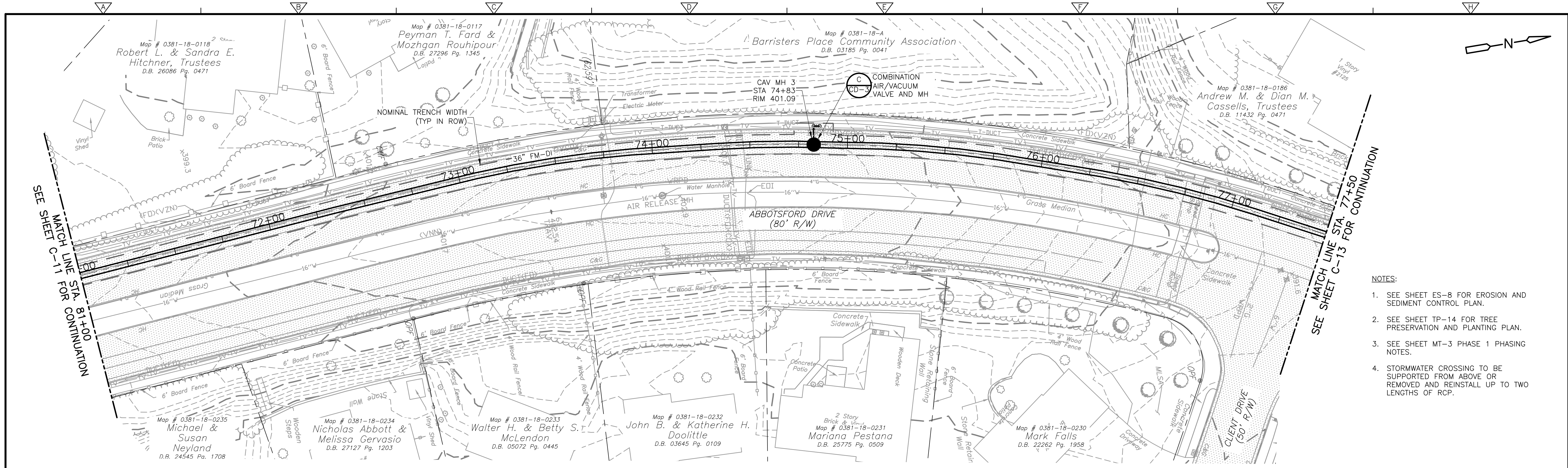
REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: G. THOMAS	 10306 Eaton Place, Suite 220 Fairfax, VA 22030 Tel: (703) 691-6500
DRAWN BY: C. MILLER	
SHEET CHK'D BY: J. KUNAY	
CROSS CHK'D BY: _____	
APPROVED BY: _____	
DATE: AUGUST 2024	

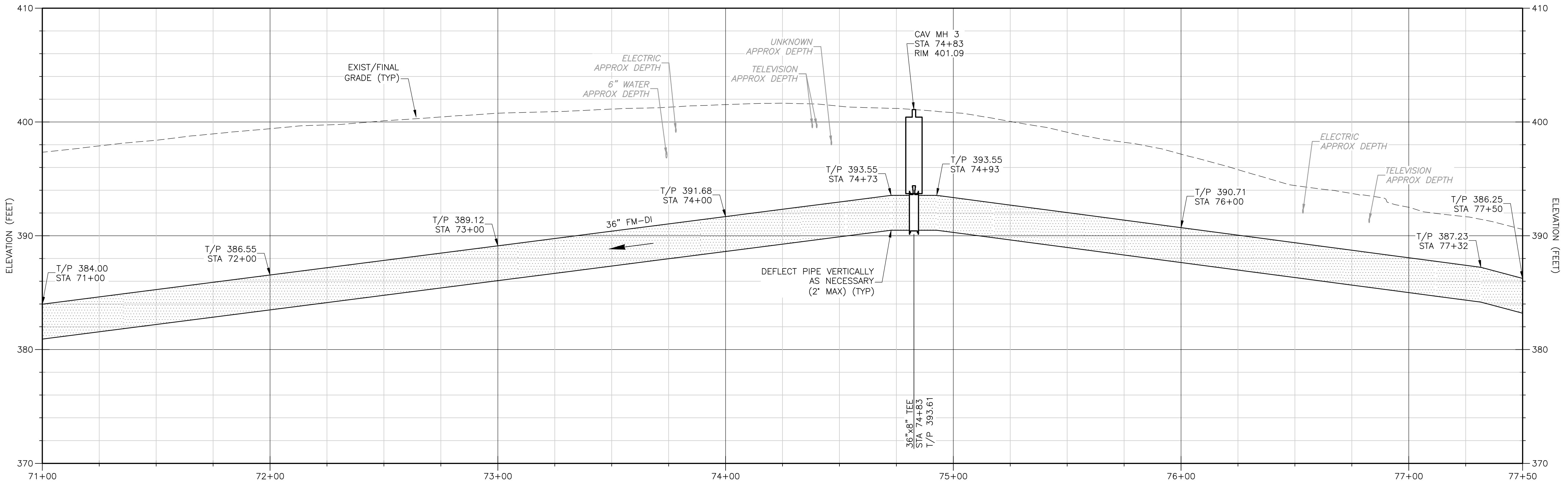
FAIRFAX COUNTY, VIRGINIA
DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
TYSONS WASTEWATER CONVEYANCE SYSTEM
MODIFICATIONS
PACKAGE 4: FORCE MAIN

ABBOTSFORD DRIVE
PLAN AND PROFILES
STA 64+50 TO STA 71+00

PROJECT NO. 5003-244105
FILE NAME: C011FMPP.DWG
SHEET NO. C-11



PLAN
1" = 25'



PROFILE
HORIZONTAL: 1" = 25'
VERTICAL: 1" = 5'

- NOTES:**
- SEE SHEET ES-8 FOR EROSION AND SEDIMENT CONTROL PLAN.
 - SEE SHEET TP-14 FOR TREE PRESERVATION AND PLANTING PLAN.
 - SEE SHEET MT-3 PHASE 1 PHASING NOTES.
 - STORMWATER CROSSING TO BE SUPPORTED FROM ABOVE OR REMOVED AND REINSTALL UP TO TWO LENGTHS OF RCP.

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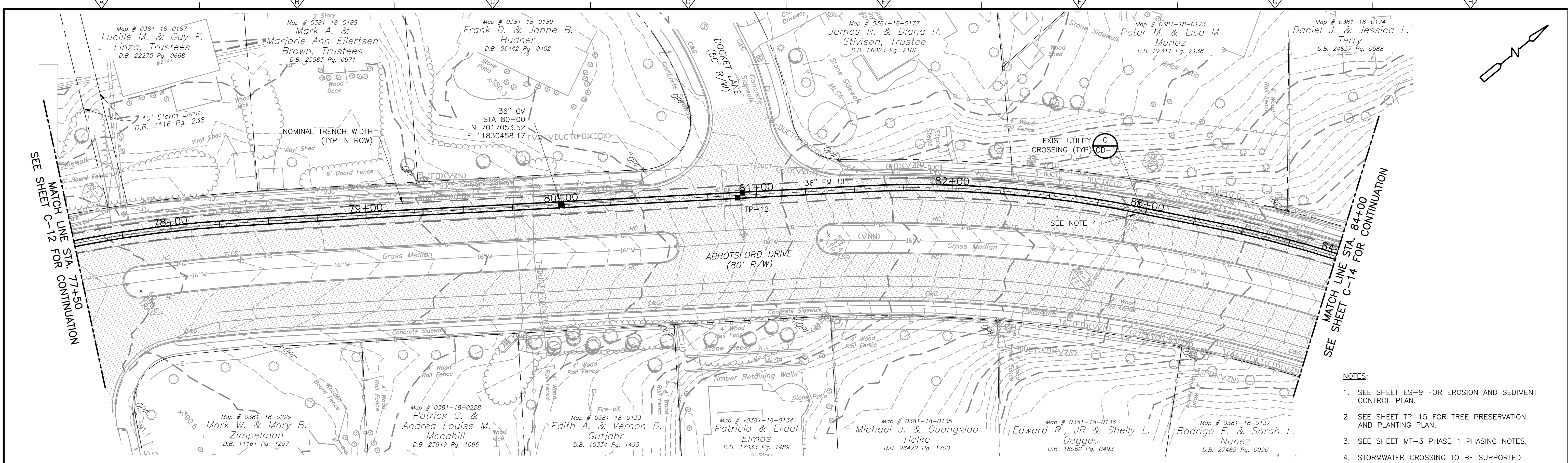
REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: G. THOMAS	<p>10306 Eaton Place, Suite 220 Fairfax, VA 22030 Tel: (703) 691-6500</p>
DRAWN BY: C. MILLER	
SHEET CHK'D BY: J. KUNAY	
CROSS CHK'D BY: _____	
APPROVED BY: _____	
DATE: AUGUST 2024	

FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
MODIFICATIONS
 PACKAGE 4: FORCE MAIN

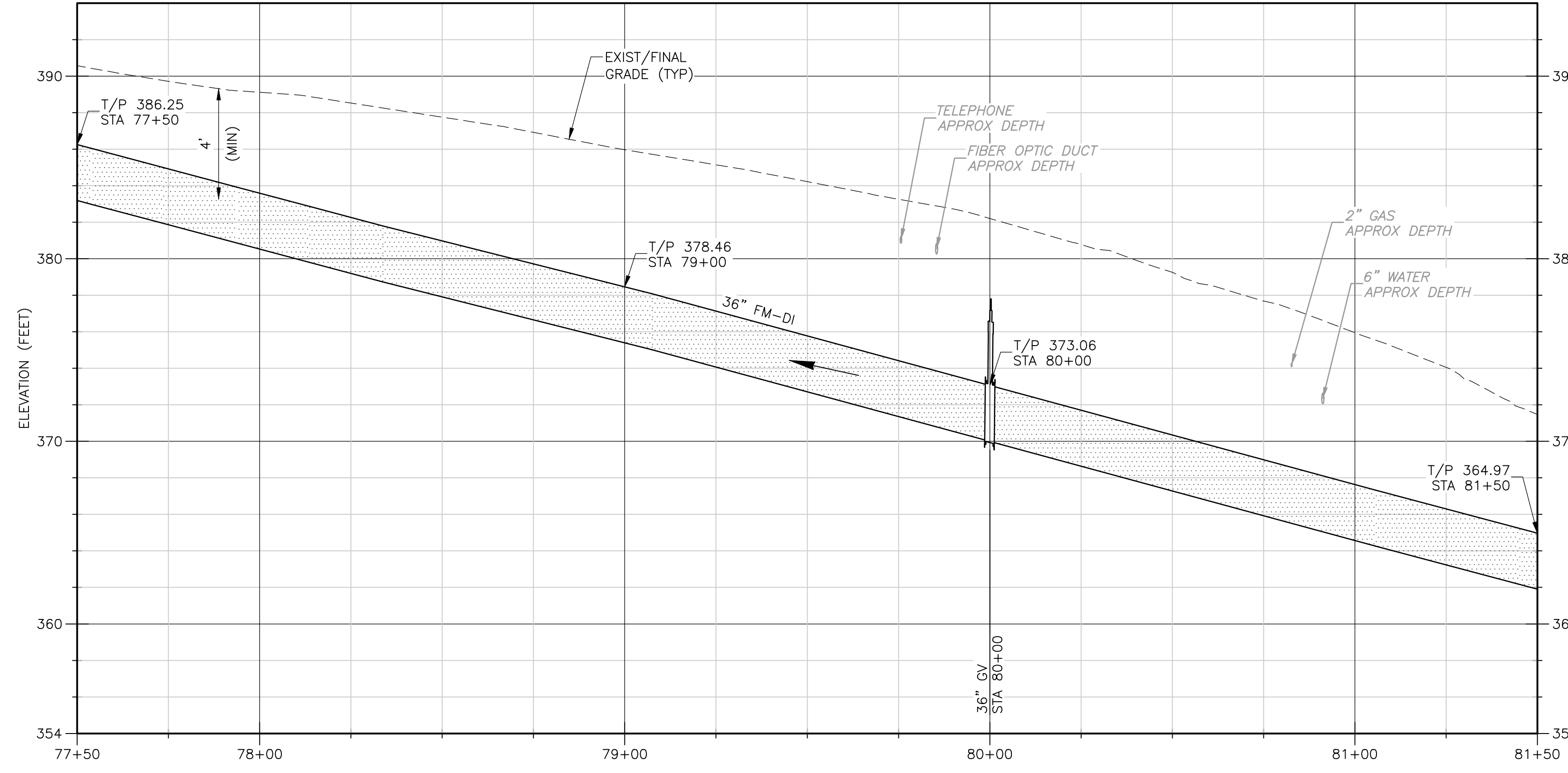
ABBOTSFORD DRIVE
PLAN AND PROFILE
STA 71+00 TO STA 77+50

PROJECT NO. 5003-244105
FILE NAME: C012FMPP.DWG
SHEET NO. C-12

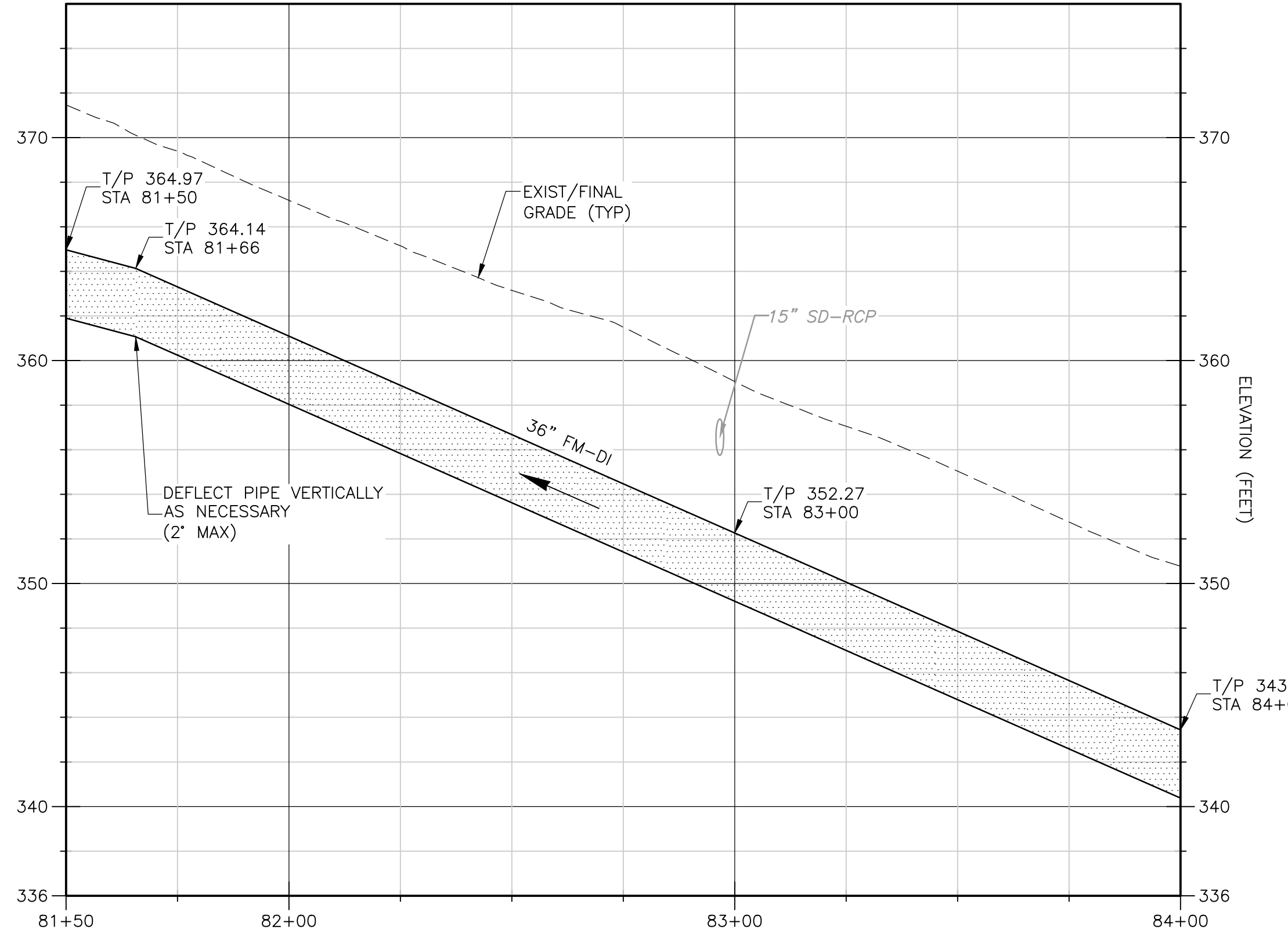


PLAN
1" = 25'

- NOTES:**
1. SEE SHEET ES-9 FOR EROSION AND SEDIMENT CONTROL PLAN.
 2. SEE SHEET TP-15 FOR TREE PRESERVATION AND PLANTING PLAN.
 3. SEE SHEET MT-3 PHASE 1 PHASING NOTES.
 4. STORMWATER CROSSING TO BE SUPPORTED FROM ABOVE OR REMOVED AND REINSTALL UP TO TWO LENGTHS OF RCP.



PROFILE
HORIZONTAL: 1" = 25'
VERTICAL: 1" = 5'



PROFILE
HORIZONTAL: 1" = 25'
VERTICAL: 1" = 5'

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REV. NO.	DATE	DRWN	CHKD	REMARKS

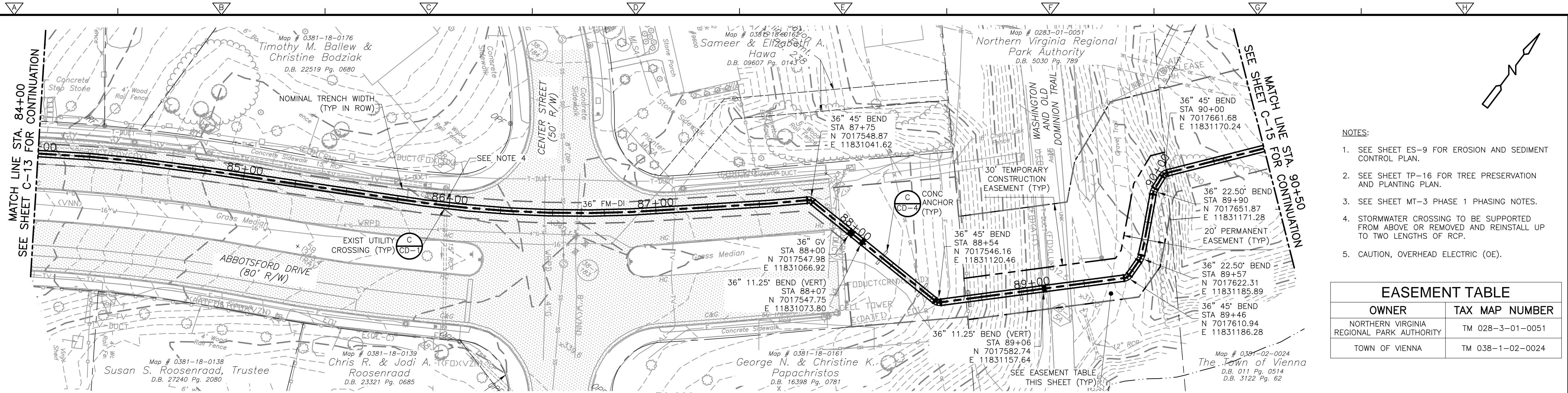
DESIGNED BY:	G. THOMAS
DRAWN BY:	C. MILLER
SHEET CHK'D BY:	J. KUNAY
CROSS CHK'D BY:	
APPROVED BY:	
DATE:	AUGUST 2024

CDM Smith
 10306 Eaton Place, Suite 220
 Fairfax, VA 22030
 Tel: (703) 691-6500

FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
MODIFICATIONS
 PACKAGE 4: FORCE MAIN

ABBOTSFORD DRIVE
PLAN AND PROFILES
 STA 77+50 TO STA 84+00

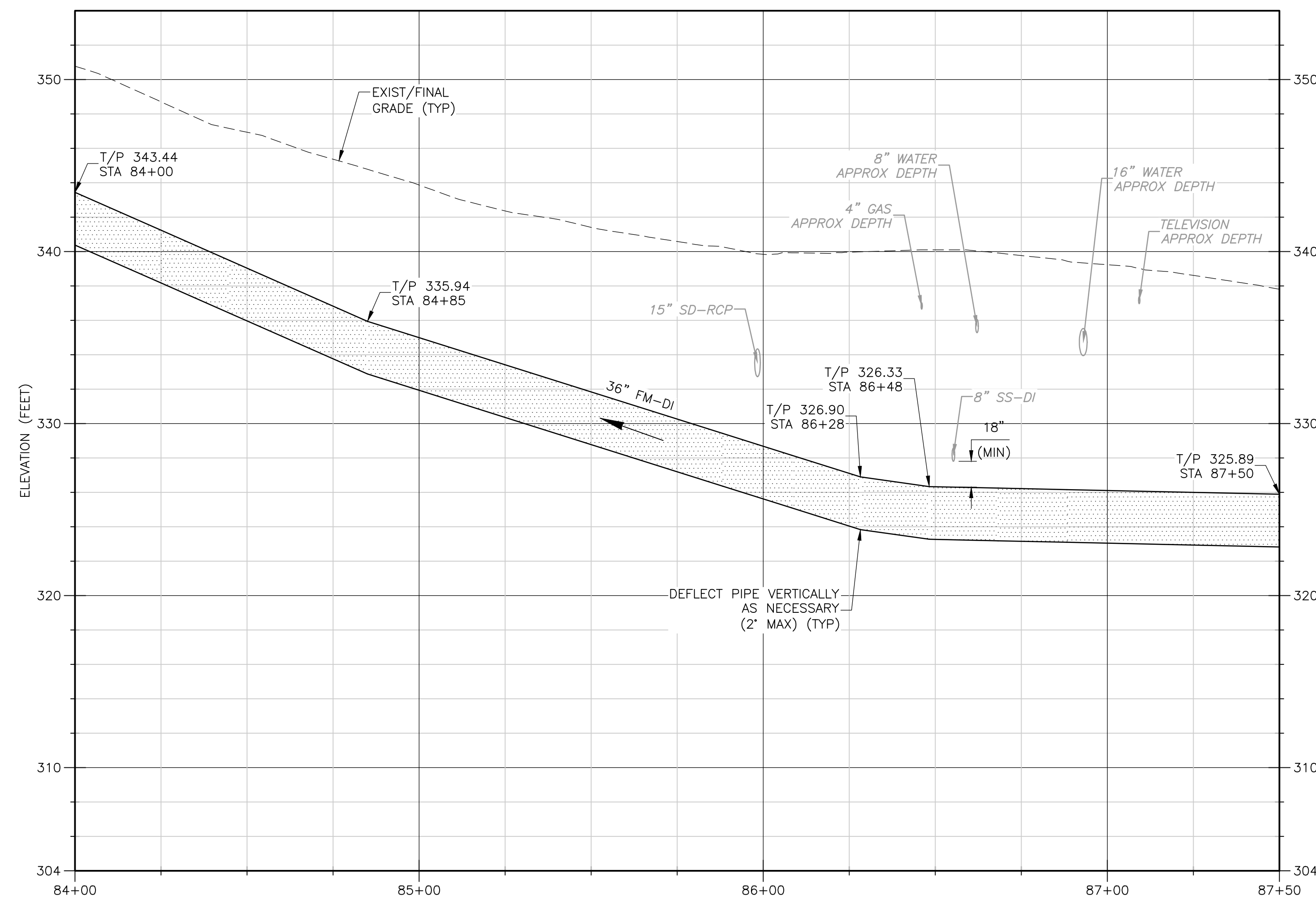
PROJECT NO.	5003-244105
FILE NAME:	C013FMPP.DWG
SHEET NO.	C-13



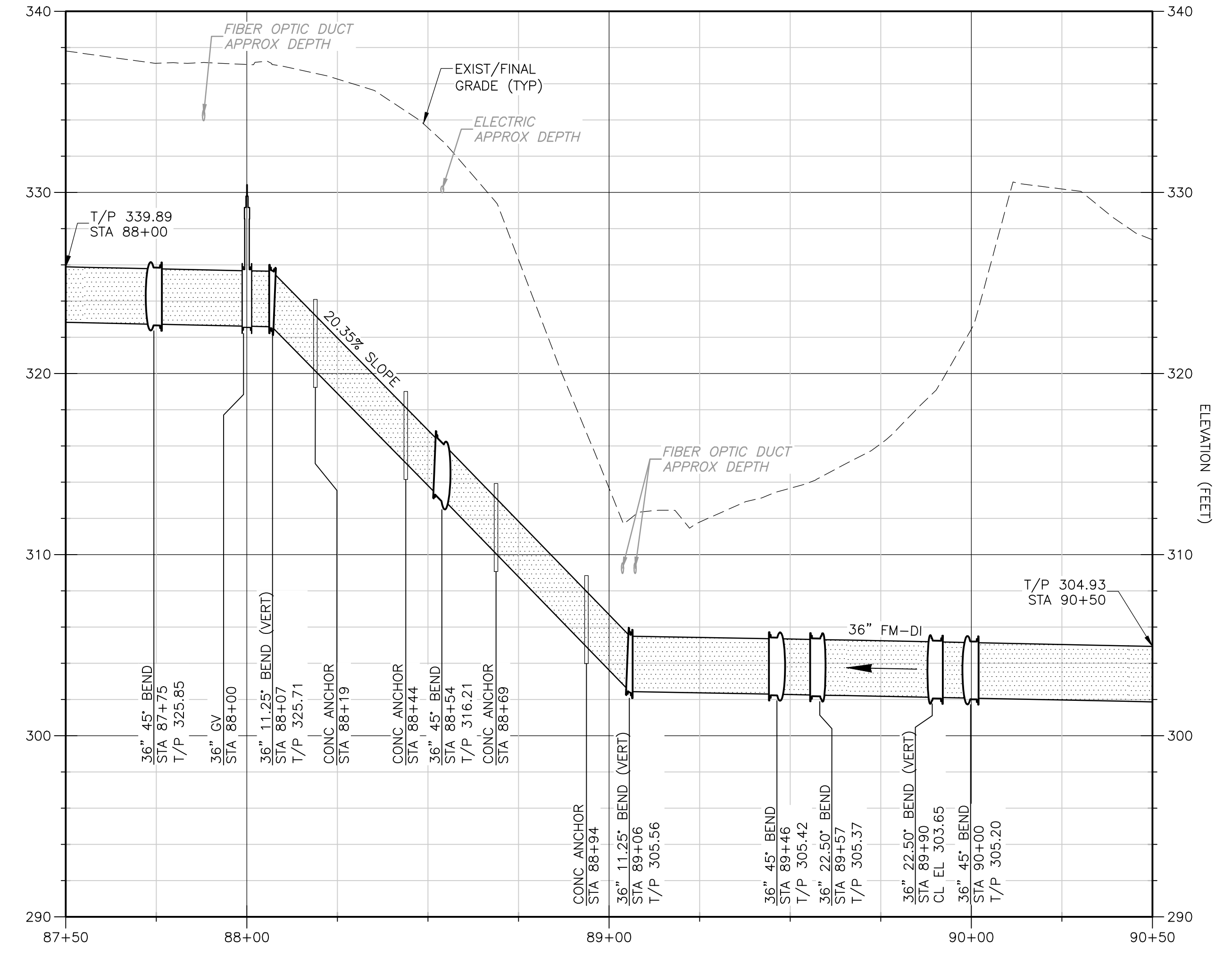
PLAN
1" = 25'

- NOTES:**
- SEE SHEET ES-9 FOR EROSION AND SEDIMENT CONTROL PLAN.
 - SEE SHEET TP-16 FOR TREE PRESERVATION AND PLANTING PLAN.
 - SEE SHEET MT-3 PHASE 1 PHASING NOTES.
 - STORMWATER CROSSING TO BE SUPPORTED FROM ABOVE OR REMOVED AND REINSTALL UP TO TWO LENGTHS OF RCP.
 - CAUTION, OVERHEAD ELECTRIC (OE).

EASEMENT TABLE	
OWNER	TAX MAP NUMBER
NORTHERN VIRGINIA REGIONAL PARK AUTHORITY	TM 028-3-01-0051
TOWN OF VIENNA	TM 038-1-02-0024



PROFILE
HORIZONTAL: 1" = 25'
VERTICAL: 1" = 5'



PROFILE
HORIZONTAL: 1" = 25'
VERTICAL: 1" = 5'

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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: G. THOMAS
 DRAWN BY: C. MILLER
 SHEET CHK'D BY: J. KUNAY
 CROSS CHK'D BY: _____
 APPROVED BY: _____
 DATE: AUGUST 2024



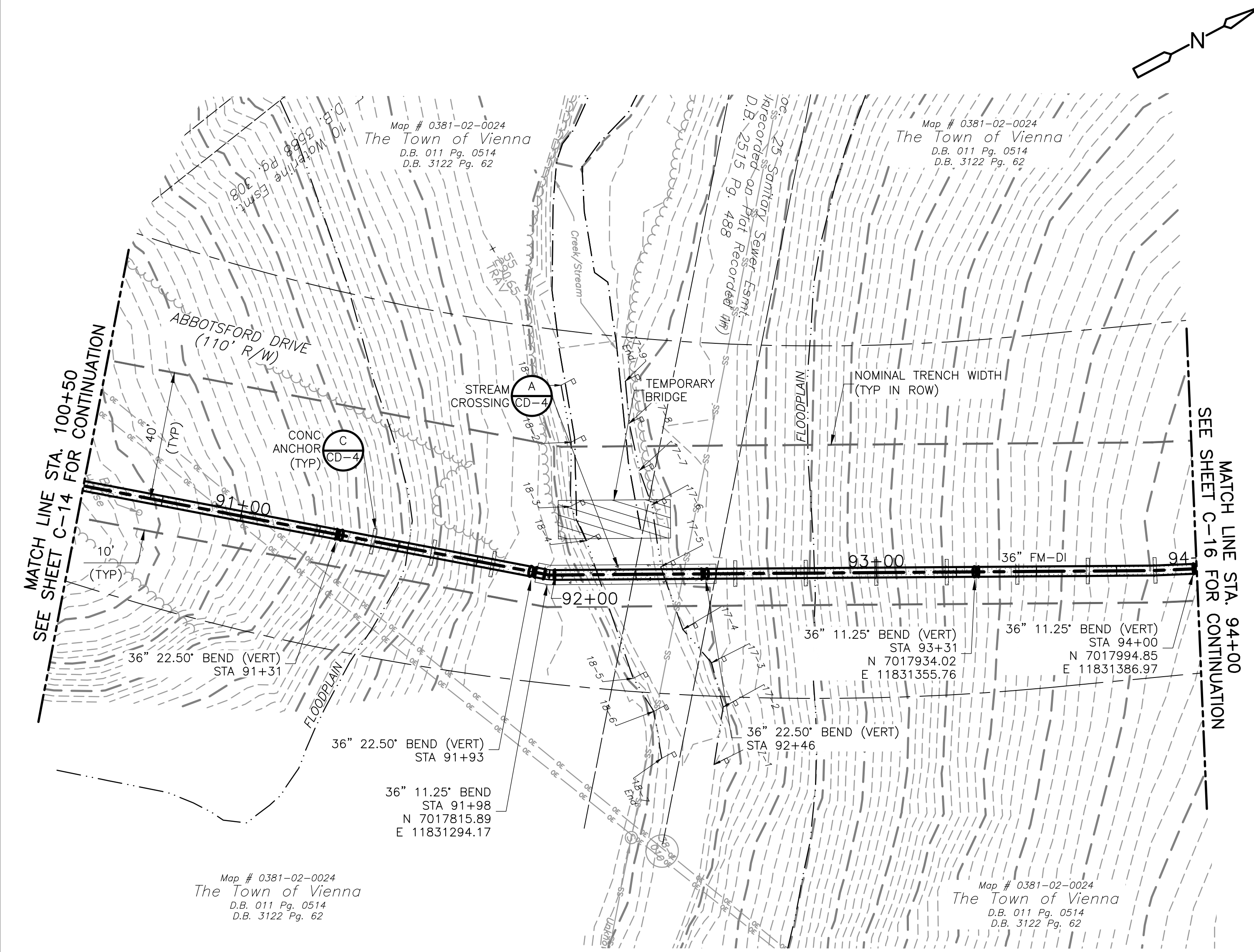
FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

ABBOTSFORD DRIVE AND EUDORA PARK
 PLAN AND PROFILES
 STA 84+00 TO STA 90+50

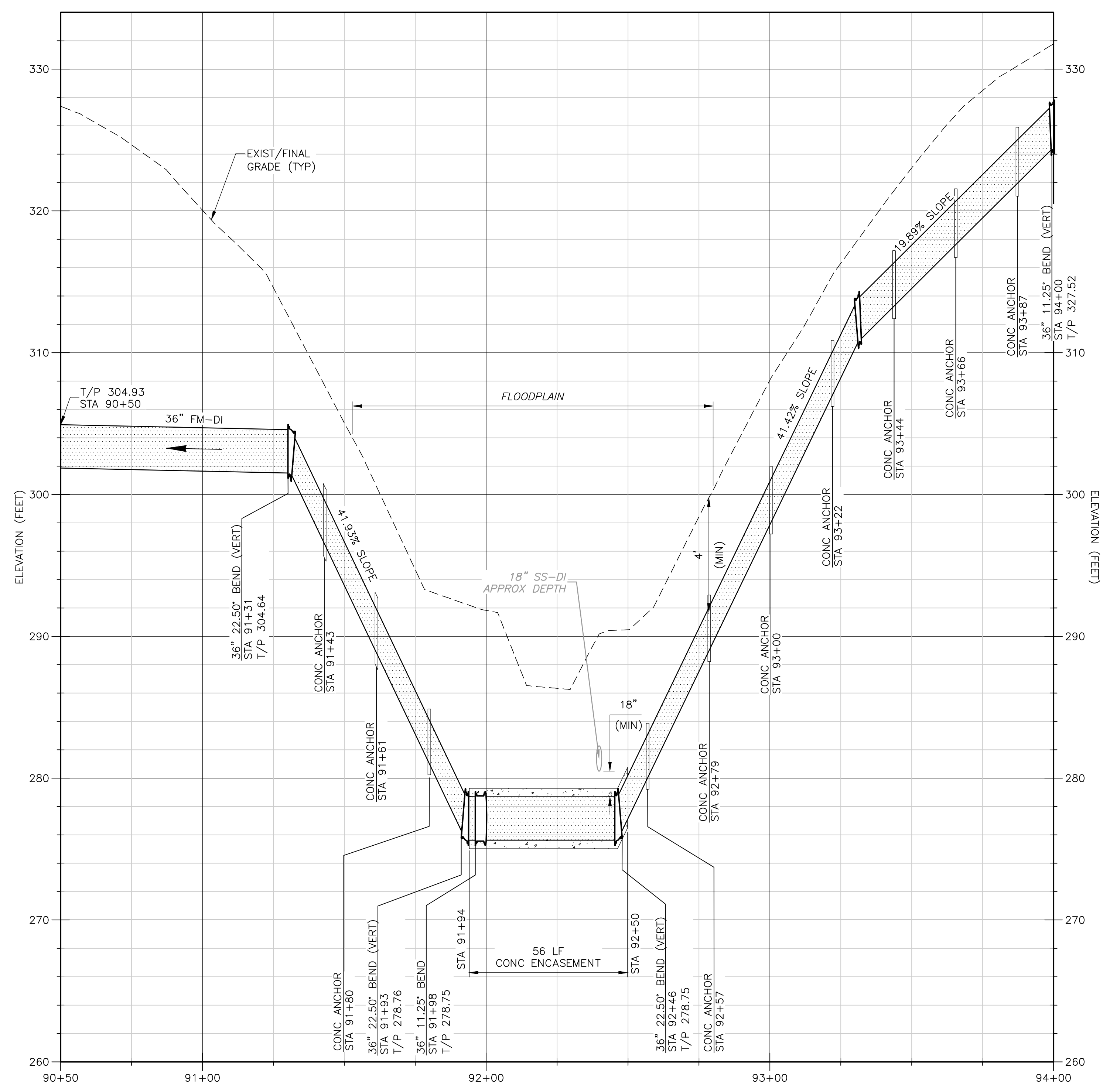
PROJECT NO.	5003-244105
FILE NAME:	C014FMPP.DWG
SHEET NO.	C-14

NOTES:

1. SEE SHEET ES-10 FOR EROSION AND SEDIMENT CONTROL PLAN.
2. SEE SHEET TP-17 FOR TREE PRESERVATION AND PLANTING PLAN.
3. SEE SHEET MT-3 PHASE 1 PHASING NOTES.
4. STORMWATER CROSSING TO BE SUPPORTED FROM ABOVE OR REMOVED AND REINSTALL UP TO TWO LENGTHS OF RCP.
5. CAUTION, OVERHEAD ELECTRIC (OE).



PLAN
1" = 25'



PROFILE
HORIZONTAL: 1" = 25'
VERTICAL: 1" = 5'

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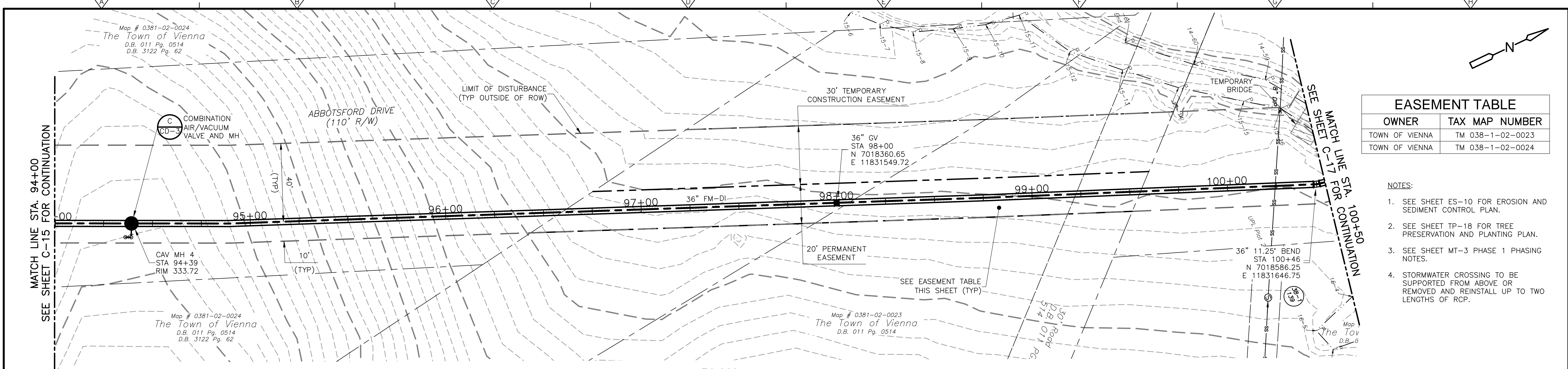
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 DRAWN BY: C. MILLER
 SHEET CHK'D BY: J. KUNAY
 CROSS CHK'D BY: _____
 APPROVED BY: _____
 DATE: AUGUST 2024



FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
MODIFICATIONS
 PACKAGE 4: FORCE MAIN

ABBOTSFORD DRIVE AND EUDORA PARK
PLAN AND PROFILE
STA 90+50 TO STA 94+00

PROJECT NO. 5003-244105
 FILE NAME: C015FMPP.DWG
 SHEET NO. **C-15**

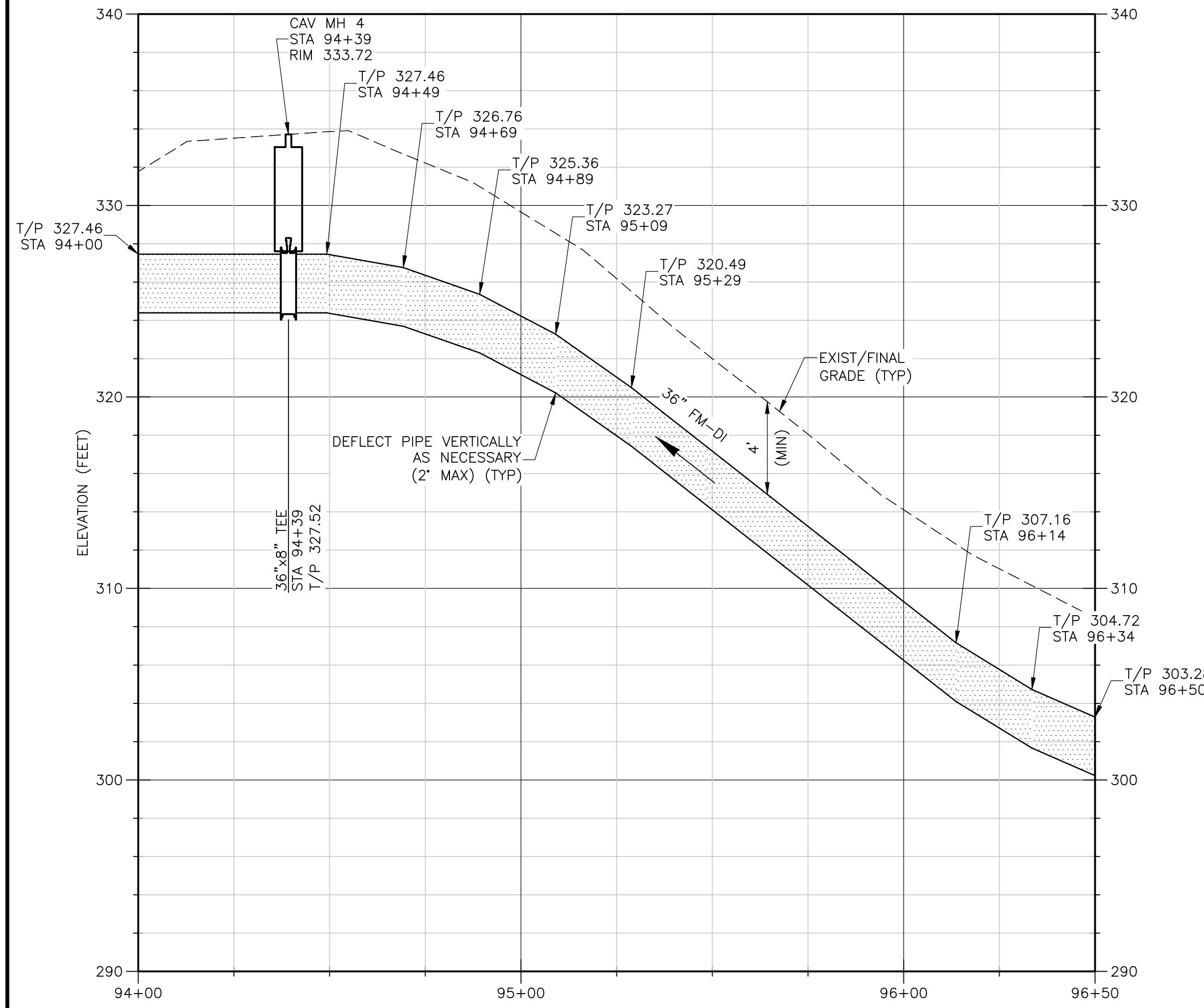


PLAN

1" = 25'

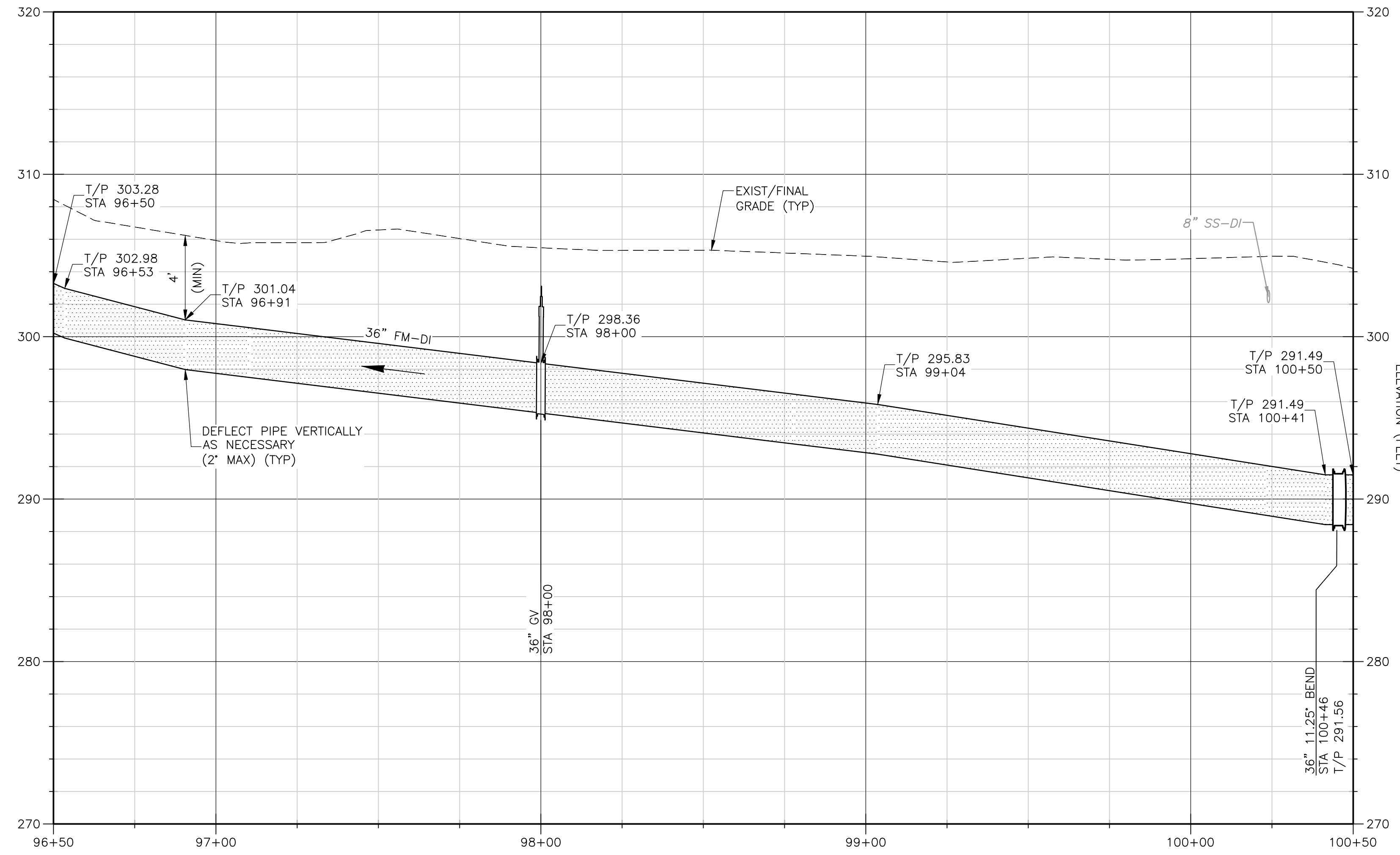
EASEMENT TABLE	
OWNER	TAX MAP NUMBER
TOWN OF VIENNA	TM 038-1-02-0023
TOWN OF VIENNA	TM 038-1-02-0024

- NOTES:
- SEE SHEET ES-10 FOR EROSION AND SEDIMENT CONTROL PLAN.
 - SEE SHEET TP-18 FOR TREE PRESERVATION AND PLANTING PLAN.
 - SEE SHEET MT-3 PHASE 1 PHASING NOTES.
 - STORMWATER CROSSING TO BE SUPPORTED FROM ABOVE OR REMOVED AND REINSTALL UP TO TWO LENGTHS OF RCP.



PROFILE

HORIZONTAL: 1" = 25'
VERTICAL: 1" = 5'



PROFILE

HORIZONTAL: 1" = 25'
VERTICAL: 1" = 5'

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REV. NO.	DATE	DRWN	CHKD	REMARKS

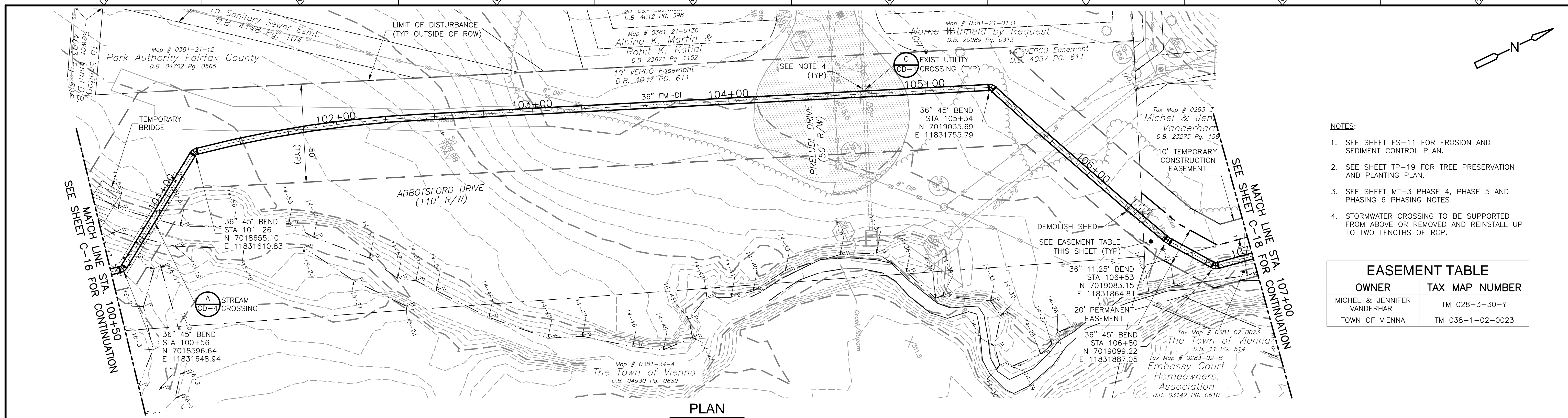
DESIGNED BY: G. THOMAS
DRAWN BY: C. MILLER
SHEET CHK'D BY: J. KUNAY
CROSS CHK'D BY: _____
APPROVED BY: _____
DATE: AUGUST 2024



FAIRFAX COUNTY, VIRGINIA
DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
TYSONS WASTEWATER CONVEYANCE SYSTEM
MODIFICATIONS
PACKAGE 4: FORCE MAIN

ABBOTSFORD DRIVE AND EUDORA PARK
PLAN AND PROFILES
STA 94+00 TO STA 100+50

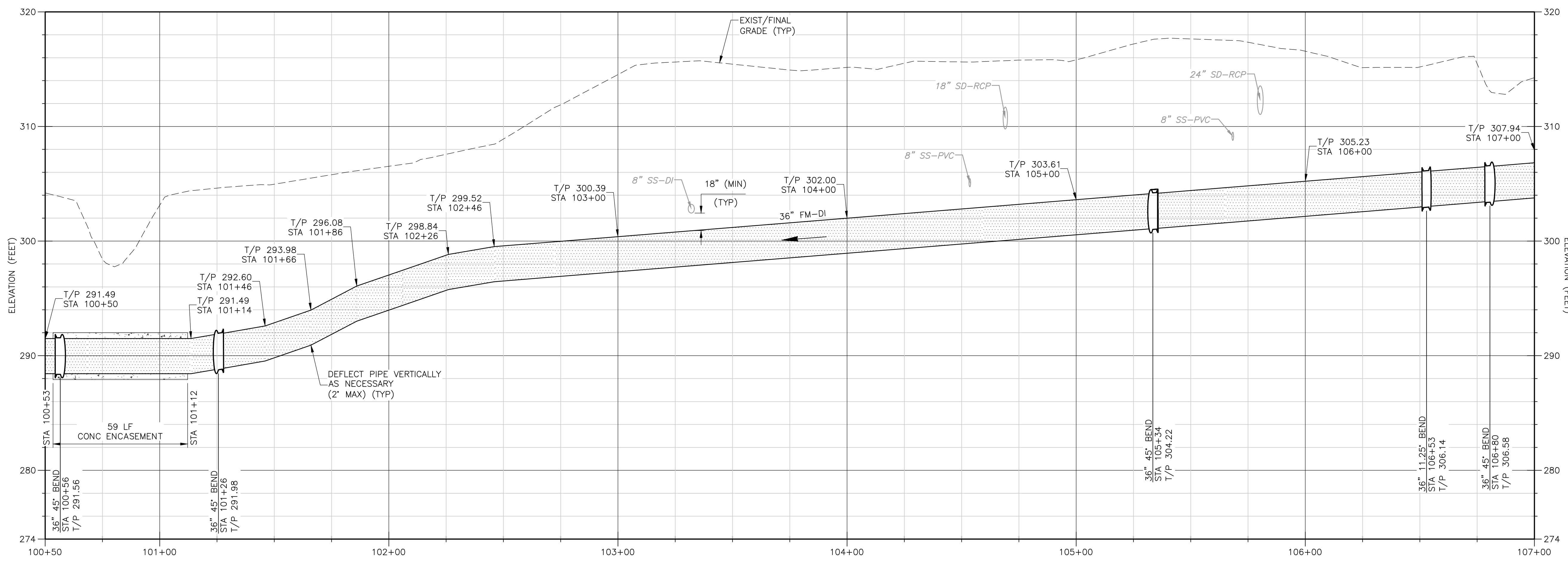
PROJECT NO. 5003-244105
FILE NAME: C016FMPP.DWG
SHEET NO. **C-16**



PLAN
1" = 25'

- NOTES:**
- SEE SHEET ES-11 FOR EROSION AND SEDIMENT CONTROL PLAN.
 - SEE SHEET TP-19 FOR TREE PRESERVATION AND PLANTING PLAN.
 - SEE SHEET MT-3 PHASE 4, PHASE 5 AND PHASING 6 PHASING NOTES.
 - STORMWATER CROSSING TO BE SUPPORTED FROM ABOVE OR REMOVED AND REINSTALL UP TO TWO LENGTHS OF RCP.

EASEMENT TABLE	
OWNER	TAX MAP NUMBER
MICHEL & JENNIFER VANDERHART	TM 028-3-30-Y
TOWN OF VIENNA	TM 038-1-02-0023



PROFILE
HORIZONTAL: 1" = 25'
VERTICAL: 1" = 5'

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REV. NO.	DATE	DRWN	CHKD	REMARKS

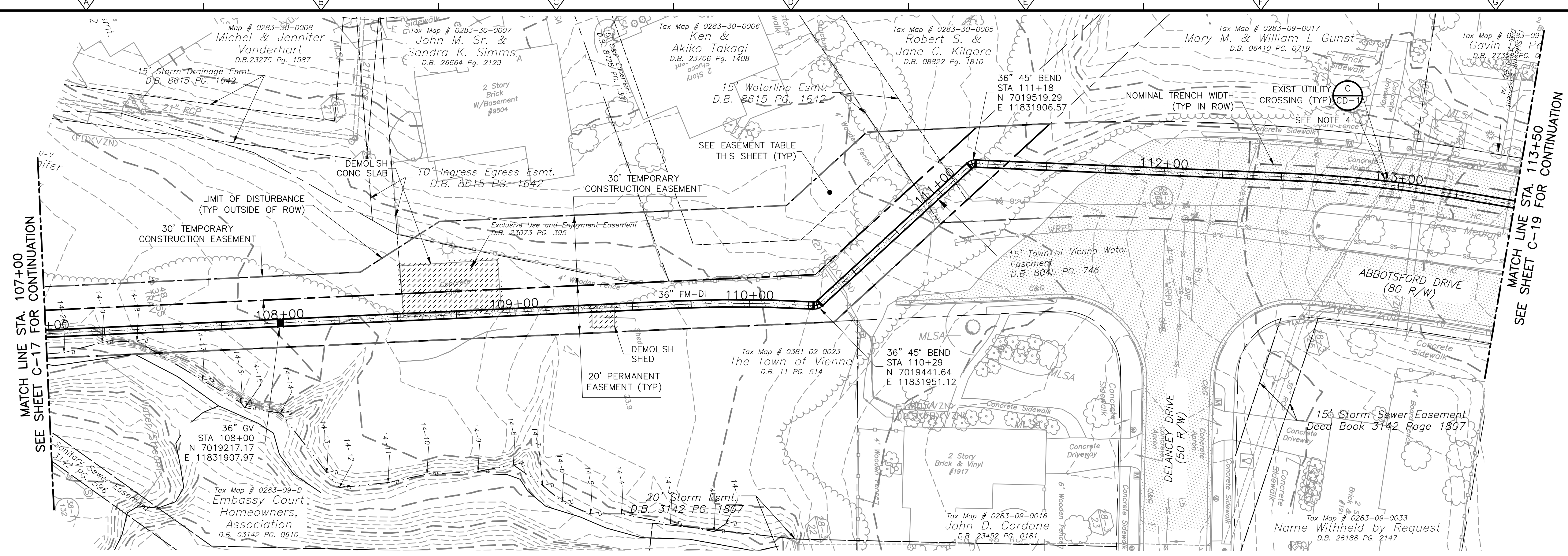
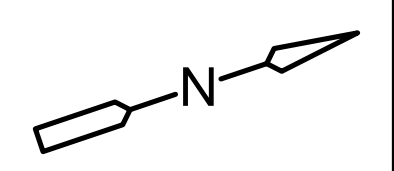
DESIGNED BY: G. THOMAS
 DRAWN BY: C. MILLER
 SHEET CHK'D BY: J. KUNAY
 CROSS CHK'D BY: _____
 APPROVED BY: _____
 DATE: AUGUST 2024



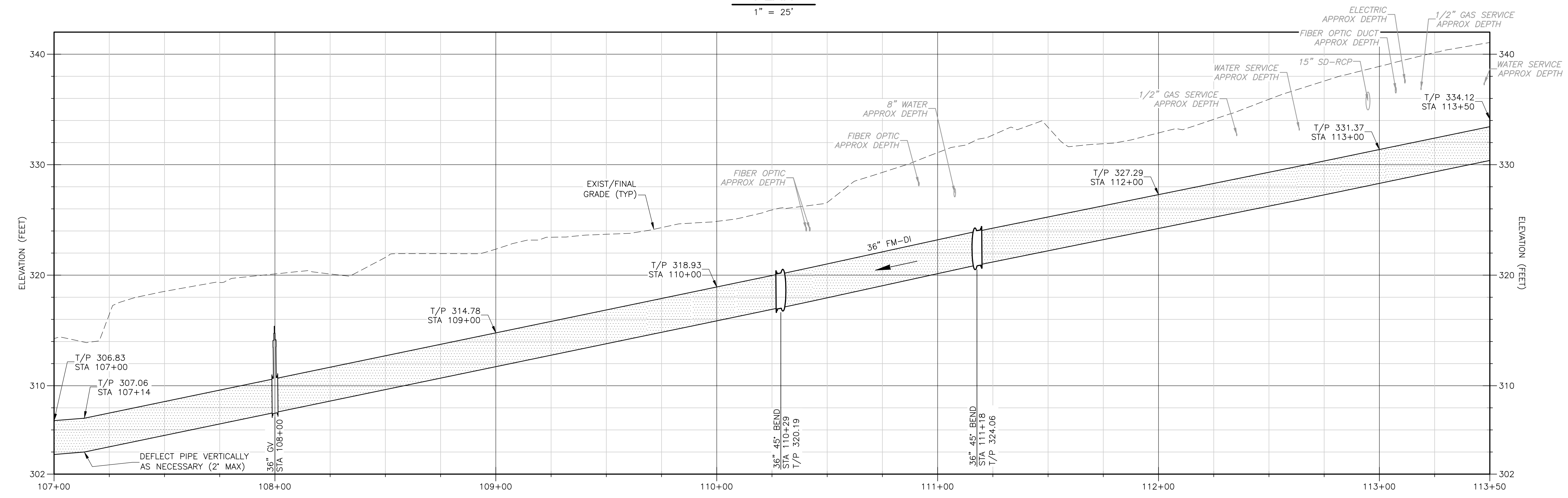
FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
MODIFICATIONS
 PACKAGE 4: FORCE MAIN

ABBOTSFORD DRIVE AND EUDORA PARK
 PLAN AND PROFILES
 STA 100+50 TO STA 107+00

PROJECT NO. 5003-244105
FILE NAME: C017FMPP.DWG
SHEET NO. C-17



PLAN
1" = 25'



PROFILE
HORIZONTAL: 1" = 25'
VERTICAL: 1" = 5'

- NOTES:**
- SEE SHEET ES-11 FOR EROSION AND SEDIMENT CONTROL PLAN.
 - SEE SHEET TP-20 FOR TREE PRESERVATION AND PLANTING PLAN.
 - SEE SHEET MT-3 PHASE 6 AND PHASE 7 PHASING NOTES AND SHEET MT-4 PHASE 7 TRAFFIC CONTROL.
 - STORMWATER CROSSING TO BE SUPPORTED FROM ABOVE OR REMOVED AND REINSTALL UP TO TWO LENGTHS OF RCP.

EASEMENT TABLE	
OWNER	TAX MAP NUMBER
MICHEL & JENNIFER VANDERHART	TM 028-3-30-Y
JOHN M. SR. & SANDRA K. SIMMS	TM 028-3-30-0007
KEN & AKIKO TAKAGI	TM 028-3-30-0006
ROBERT S. & JANE C. KILGORE	TM 028-3-30-0005

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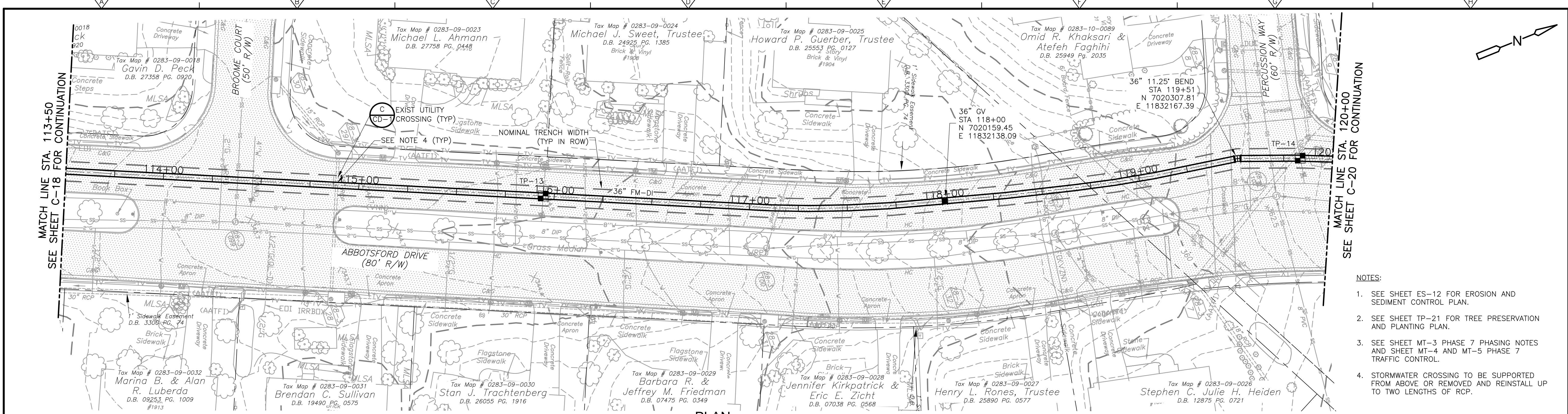
REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: G. THOMAS	<p>10306 Eaton Place, Suite 220 Fairfax, VA 22030 Tel: (703) 691-6500</p>
DRAWN BY: C. MILLER	
SHEET CHK'D BY: J. KUNAY	
CROSS CHK'D BY: _____	
APPROVED BY: _____	
DATE: AUGUST 2024	

FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

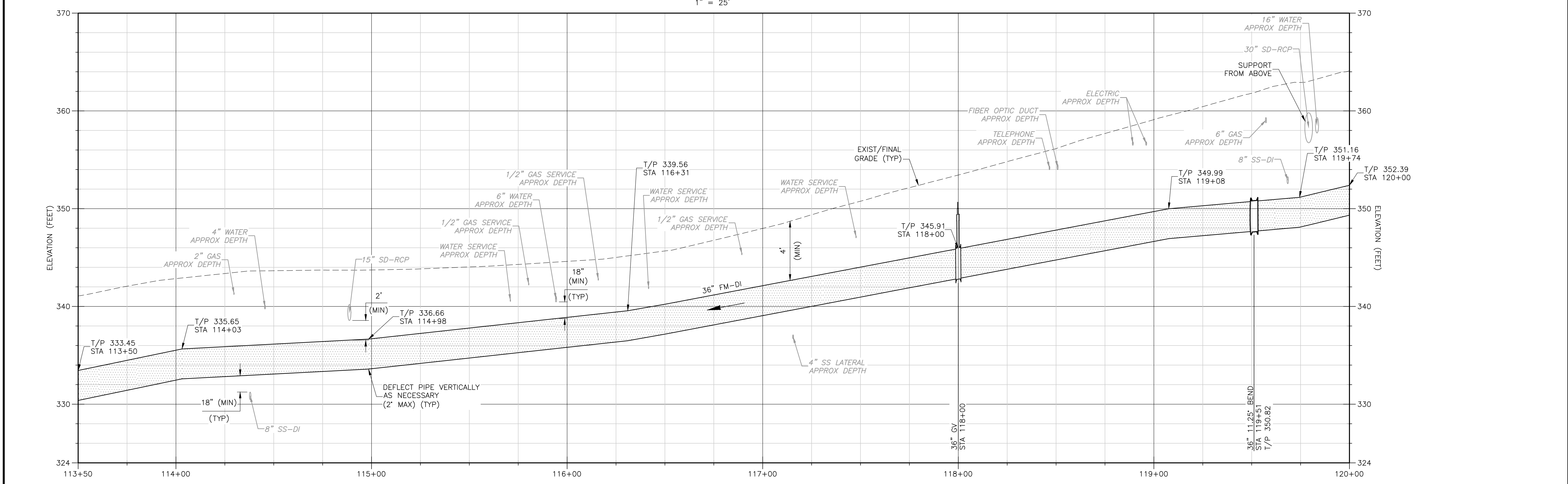
ABBOTSFORD DRIVE
 PLAN AND PROFILE
 STA 107+00 TO STA 113+50

PROJECT NO. 5003-244105
FILE NAME: CO18FMPP.DWG
SHEET NO. C-18



PLAN
1" = 25'

- NOTES:
- SEE SHEET ES-12 FOR EROSION AND SEDIMENT CONTROL PLAN.
 - SEE SHEET TP-21 FOR TREE PRESERVATION AND PLANTING PLAN.
 - SEE SHEET MT-3 PHASE 7 PHASING NOTES AND SHEET MT-4 AND MT-5 PHASE 7 TRAFFIC CONTROL.
 - STORMWATER CROSSING TO BE SUPPORTED FROM ABOVE OR REMOVED AND REINSTALL UP TO TWO LENGTHS OF RCP.



PROFILE
HORIZONTAL: 1" = 25'
VERTICAL: 1" = 5'

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY:	G. THOMAS
DRAWN BY:	C. MILLER
SHEET CHK'D BY:	J. KUNAY
CROSS CHK'D BY:	
APPROVED BY:	
DATE:	AUGUST 2024

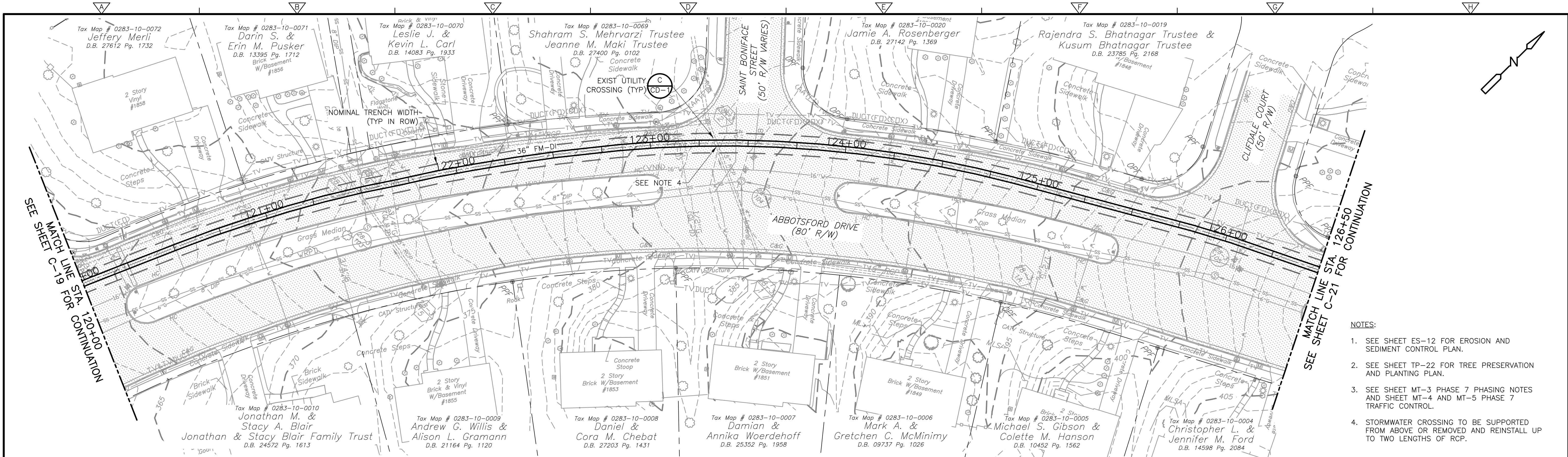


FAIRFAX COUNTY, VIRGINIA
DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
TYSONS WASTEWATER CONVEYANCE SYSTEM
MODIFICATIONS
PACKAGE 4: FORCE MAIN

ABBOTSFORD DRIVE
PLAN AND PROFILE
STA 113+50 TO STA 120+00

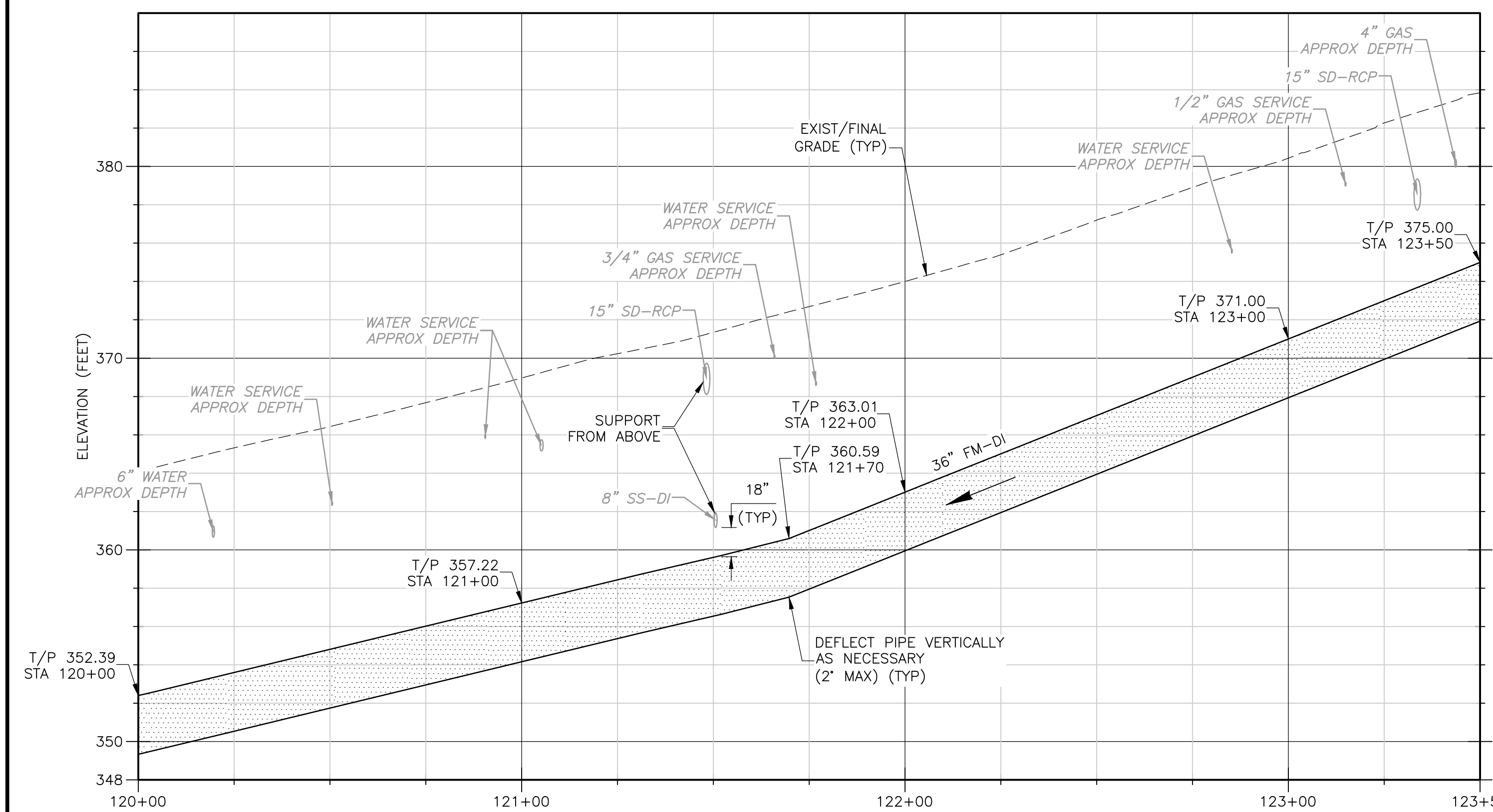
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FILE NAME:	C019FMPP.DWG
SHEET NO.	C-19

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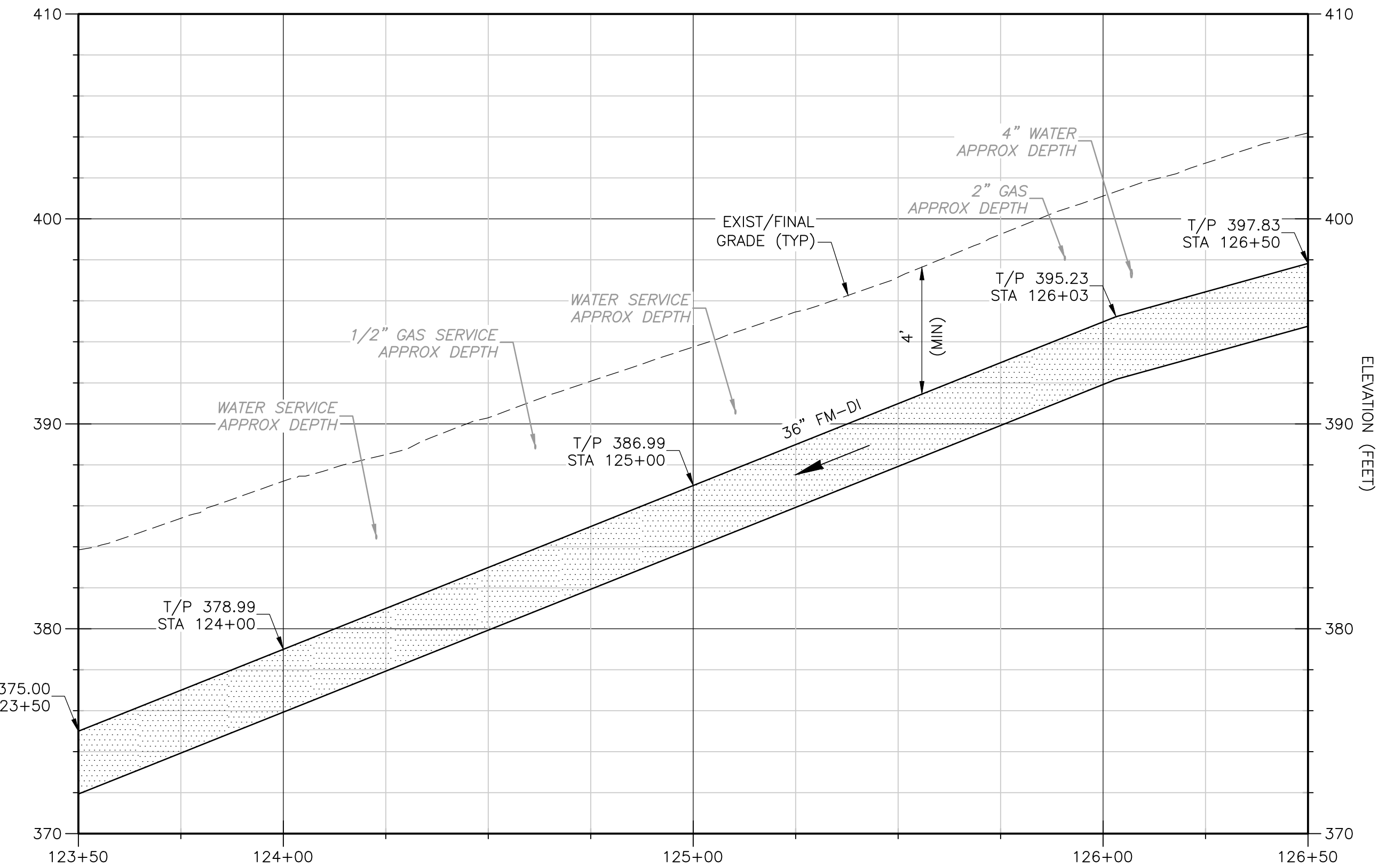


PLAN
1" = 25'

- NOTES:**
- SEE SHEET ES-12 FOR EROSION AND SEDIMENT CONTROL PLAN.
 - SEE SHEET TP-22 FOR TREE PRESERVATION AND PLANTING PLAN.
 - SEE SHEET MT-3 PHASE 7 PHASING NOTES AND SHEET MT-4 AND MT-5 PHASE 7 TRAFFIC CONTROL.
 - STORMWATER CROSSING TO BE SUPPORTED FROM ABOVE OR REMOVED AND REINSTALL UP TO TWO LENGTHS OF RCP.



PROFILE
HORIZONTAL: 1" = 25'
VERTICAL: 1" = 5'



PROFILE
HORIZONTAL: 1" = 25'
VERTICAL: 1" = 5'

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REV. NO.	DATE	DRWN	CHKD	REMARKS

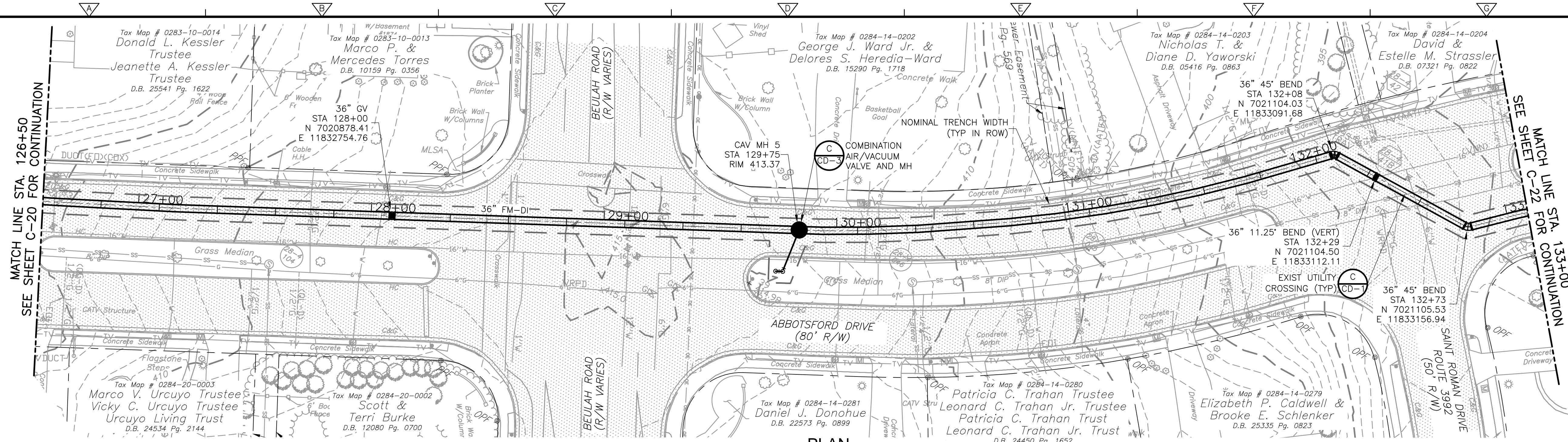
DESIGNED BY:	G. THOMAS
DRAWN BY:	C. MILLER
SHEET CHK'D BY:	J. KUNAY
CROSS CHK'D BY:	
APPROVED BY:	
DATE:	AUGUST 2024

CDM Smith
 10306 Eaton Place, Suite 220
 Fairfax, VA 22030
 Tel: (703) 691-6500

FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
MODIFICATIONS
 PACKAGE 4: FORCE MAIN

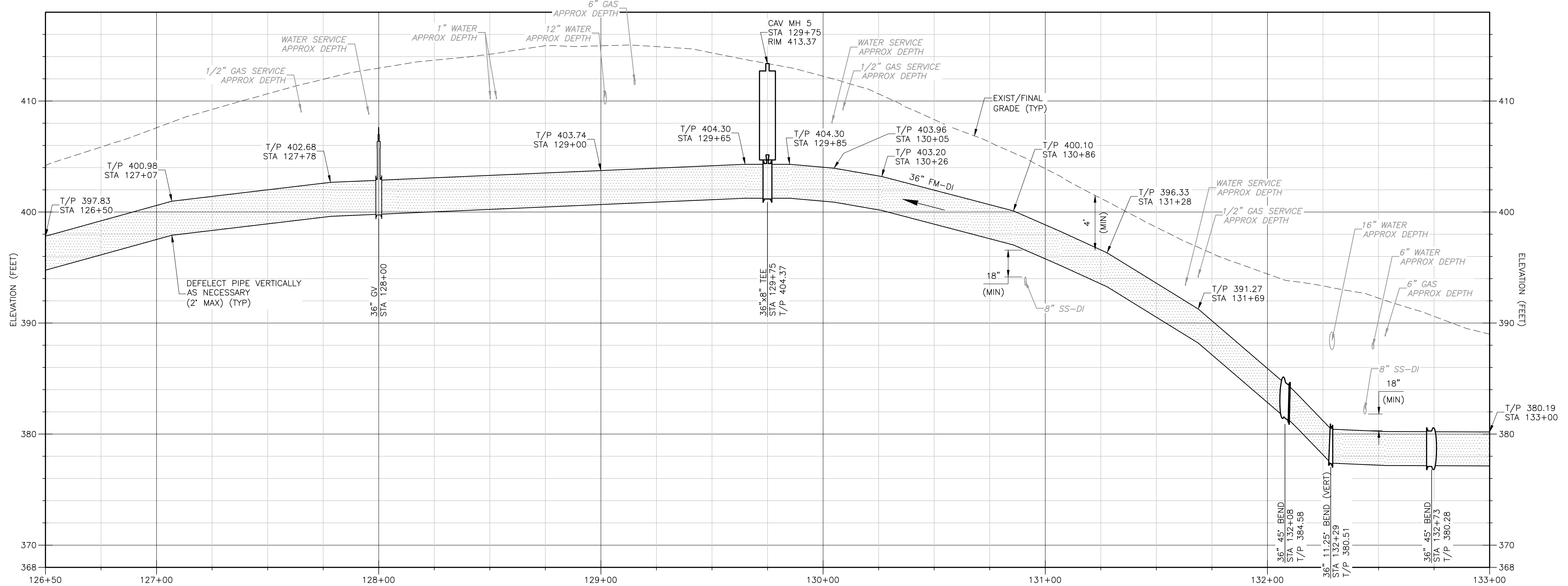
ABBOTSFORD DRIVE
PLAN AND PROFILES
STA 120+00 TO STA 126+50

PROJECT NO.	5003-244105
FILE NAME:	C020FMPP.DWG
SHEET NO.	C-20



PLAN
1" = 25'

- NOTES:
- SEE SHEET ES-13 FOR EROSION AND SEDIMENT CONTROL PLAN.
 - SEE SHEET TP-23 FOR TREE PRESERVATION AND PLANTING PLAN.
 - SEE SHEET MT-3 PHASE 7 PHASING NOTES AND SHEET MT-5, MT-6 AND MT-7 PHASE 7 TRAFFIC CONTROL.
 - STORMWATER CROSSING TO BE SUPPORTED FROM ABOVE OR REMOVED AND REINSTALL UP TO TWO LENGTHS OF RCP.



PROFILE
HORIZONTAL: 1" = 25'
VERTICAL: 1" = 5'

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REV. NO.	DATE	DRWN	CHKD	REMARKS

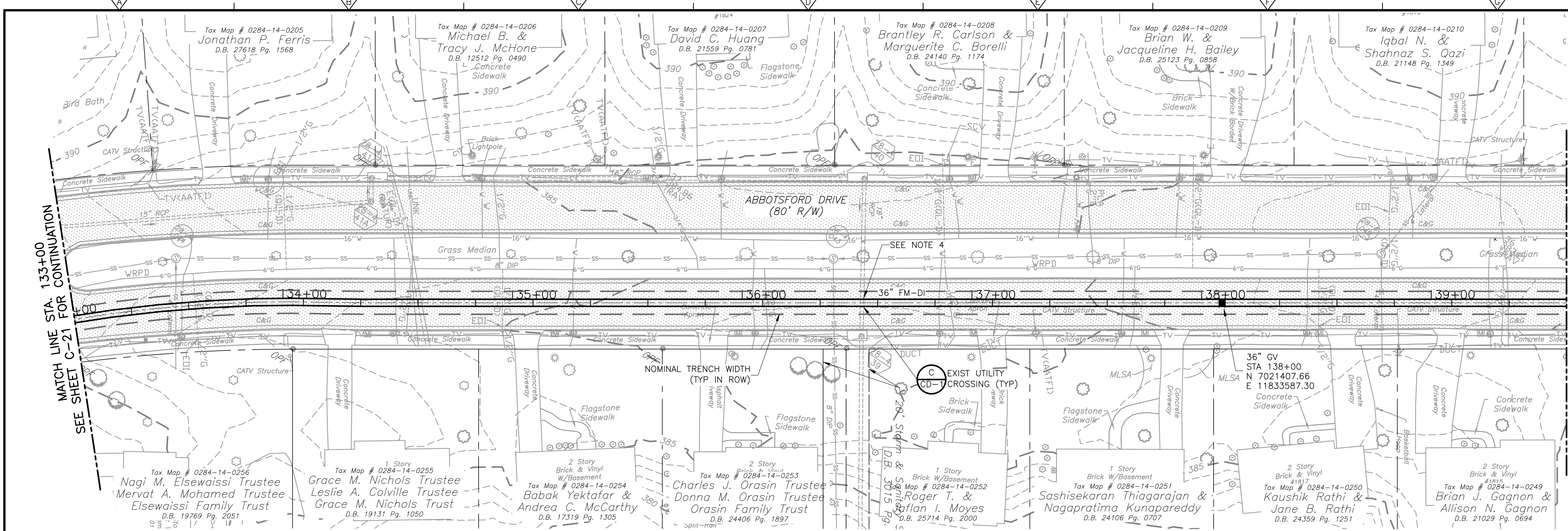
DESIGNED BY: G. THOMAS
 DRAWN BY: C. MILLER
 SHEET CHK'D BY: J. KUNAY
 CROSS CHK'D BY: _____
 APPROVED BY: _____
 DATE: AUGUST 2024



FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

PROJECT NO. 5003-244105
 FILE NAME: C021FMPP.DWG
 SHEET NO. C-21

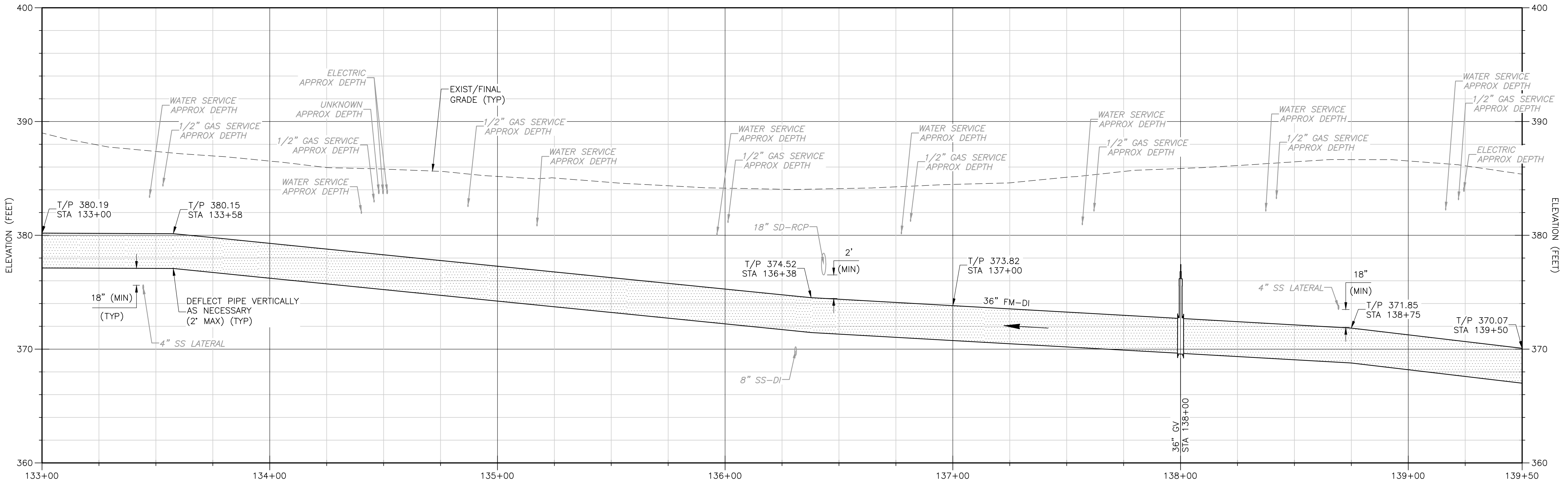
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 FILE NAME: C021FMPP.DWG
 SHEET NO. C-21



PLAN

1" = 25'

- NOTES:**
- SEE SHEET ES-13 FOR EROSION AND SEDIMENT CONTROL PLAN.
 - SEE SHEET TP-24 FOR TREE PRESERVATION AND PLANTING PLAN.
 - SEE SHEET MT-3 PHASE 7 PHASING NOTES.
 - STORMWATER CROSSING TO BE SUPPORTED FROM ABOVE OR REMOVED AND REINSTALL UP TO TWO LENGTHS OF RCP.



PROFILE

HORIZONTAL: 1" = 25'
VERTICAL: 1" = 5'

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REV. NO.	DATE	DRWN	CHKD	REMARKS

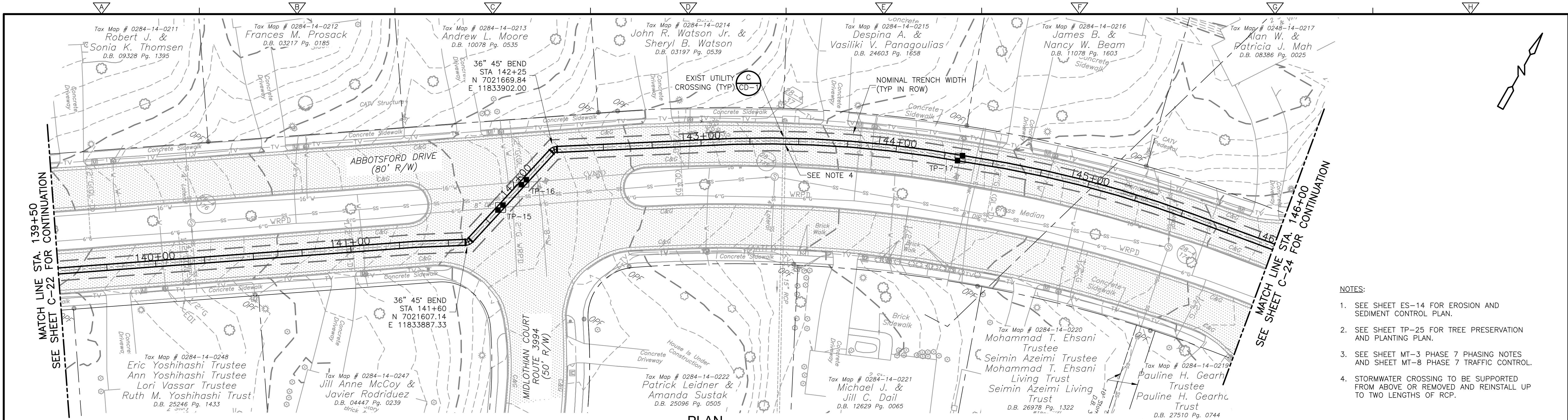
DESIGNED BY: G. THOMAS
 DRAWN BY: C. MILLER
 SHEET CHK'D BY: J. KUNAY
 CROSS CHK'D BY: _____
 APPROVED BY: _____
 DATE: AUGUST 2024



FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

ABBOTSFORD DRIVE
 PLAN AND PROFILE
 STA 133+00 TO STA 139+50

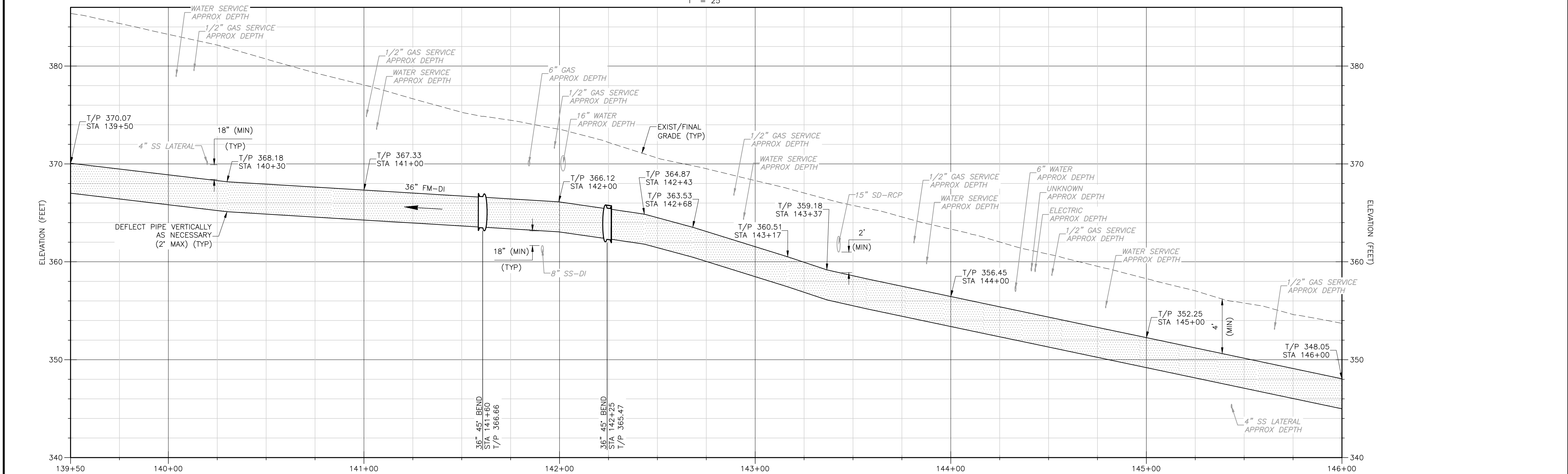
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 FILE NAME: C022FMPP.DWG
 SHEET NO. C-22



PLAN

1" = 25'

- NOTES:**
- SEE SHEET ES-14 FOR EROSION AND SEDIMENT CONTROL PLAN.
 - SEE SHEET TP-25 FOR TREE PRESERVATION AND PLANTING PLAN.
 - SEE SHEET MT-3 PHASE 7 PHASING NOTES AND SHEET MT-8 PHASE 7 TRAFFIC CONTROL.
 - STORMWATER CROSSING TO BE SUPPORTED FROM ABOVE OR REMOVED AND REINSTALL UP TO TWO LENGTHS OF RCP.



PROFILE

HORIZONTAL: 1" = 25'
VERTICAL: 1" = 5'

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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY:	G. THOMAS
DRAWN BY:	C. MILLER
SHEET CHK'D BY:	J. KUNAY
CROSS CHK'D BY:	
APPROVED BY:	
DATE:	AUGUST 2024

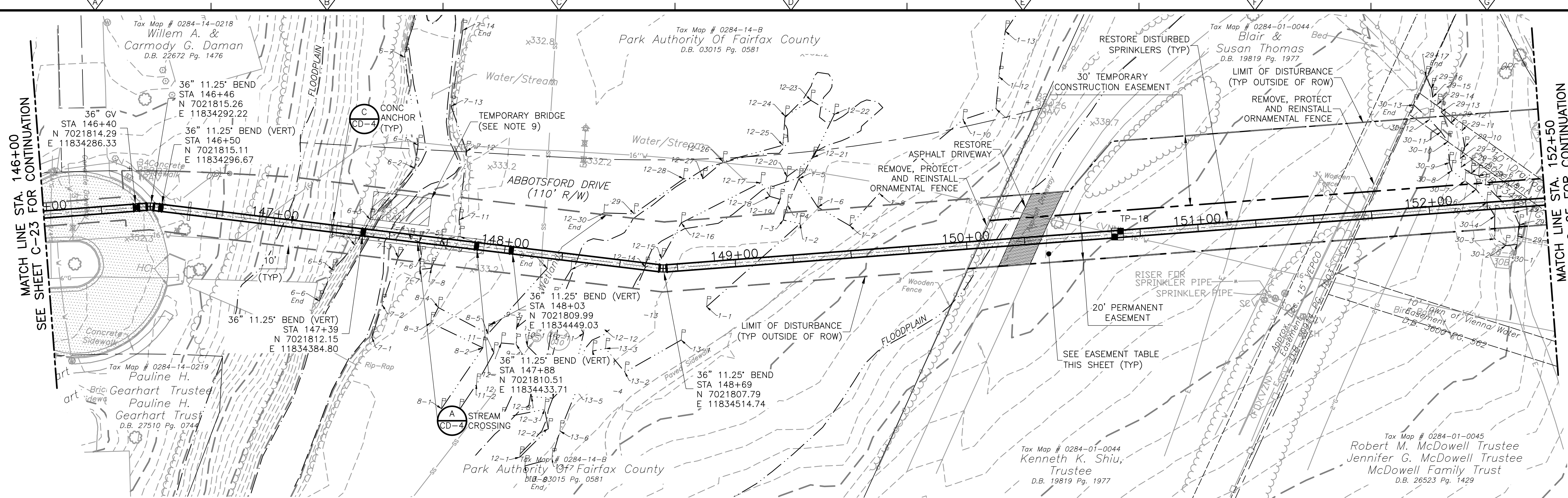
CDM Smith
 10306 Eaton Place, Suite 220
 Fairfax, VA 22030
 Tel: (703) 691-6500

FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

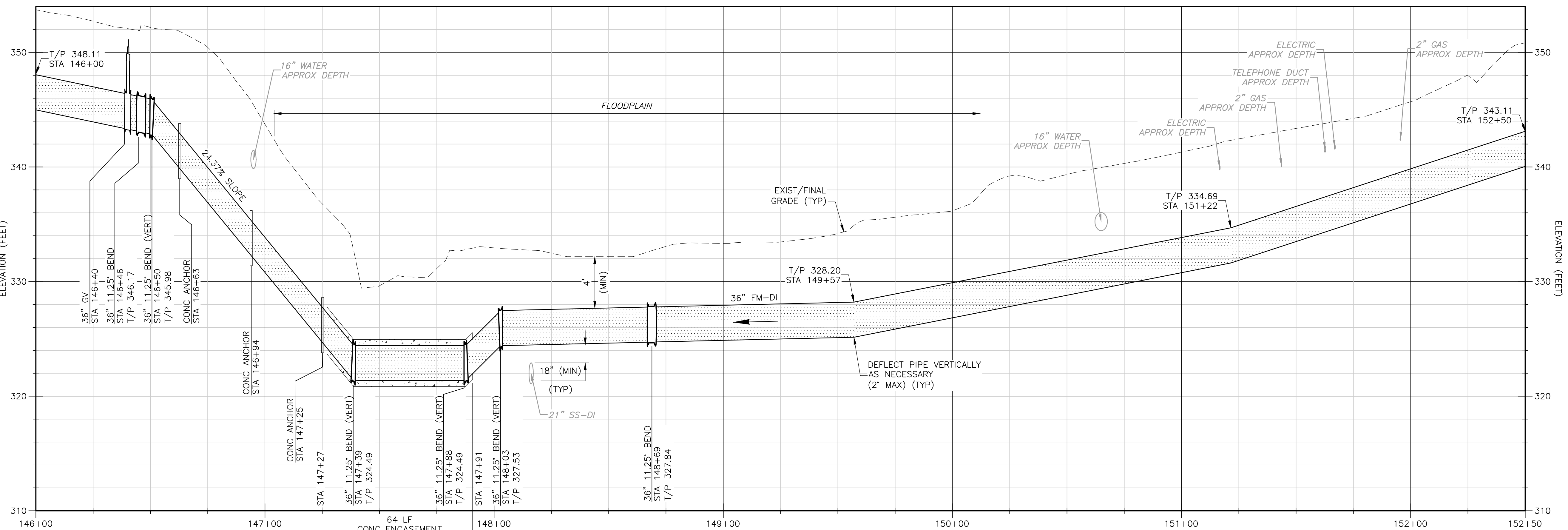
ABBOTSFORD DRIVE
PLAN AND PROFILE
STA 139+50 TO STA 146+00

C-23

PROJECT NO.	5003-244105
FILE NAME:	C023FMPP.DWG
SHEET NO.	C-23



PLAN
1" = 25'



PROFILE
HORIZONTAL: 1" = 25'
VERTICAL: 1" = 5'

- NOTES:
- SEE SHEET ES-14 FOR EROSION AND SEDIMENT CONTROL PLAN.
 - SEE SHEET TP-26 FOR TREE PRESERVATION AND PLANTING PLAN.
 - SEE SHEET MT-3 PHASE 7 AND PHASE 8 PHASING NOTES AND SHEET MT-8 PHASE 7 TRAFFIC CONTROL.
 - STORMWATER CROSSING TO BE SUPPORTED FROM ABOVE OR REMOVED
 - PLACE COFFER DAM ON EITHER SIDE OF EXCAVATION AREA.
 - REMOVE AND STOCKPILE TOP 18" OF HYDRIC SOILS FROM EXCAVATION AREA.
 - COMPLETE INSTALLATION IN ONE DAY.
 - REPLACE HYDRIC SOILS IN CHANNEL AS FINAL LAYER OF BACKFILL.
 - SPAN AREA WITH TIMBER BRIDGE FOR REMAINDER OF WORK TIME TO AVOID ADDITIONAL DISTURBANCE TO WETLAND SOILS.

EASEMENT TABLE	
OWNER	TAX MAP NUMBER
KENNETH K. SHIU, TRUSTEE	TM 028-4-01-0044
MCDOWELL FAMILY TRUST	TM 028-4-01-0045

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REV. NO.	DATE	DRWN	CHKD	REMARKS

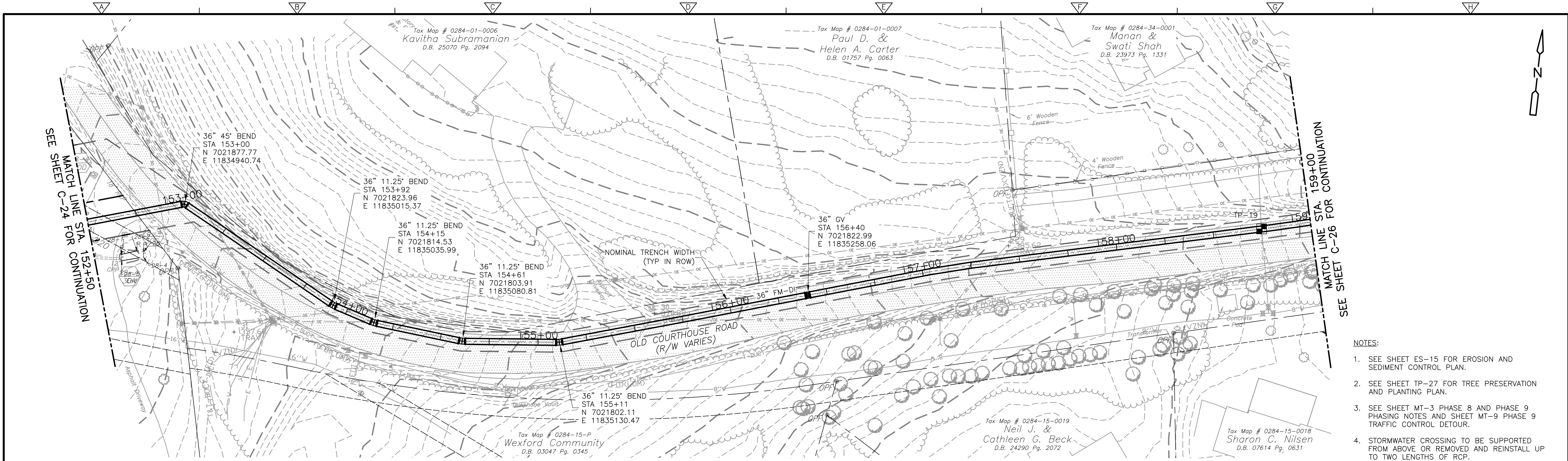
DESIGNED BY: G. THOMAS
 DRAWN BY: C. MILLER
 SHEET CHK'D BY: J. KUNAY
 CROSS CHK'D BY: []
 APPROVED BY: []
 DATE: AUGUST 2024



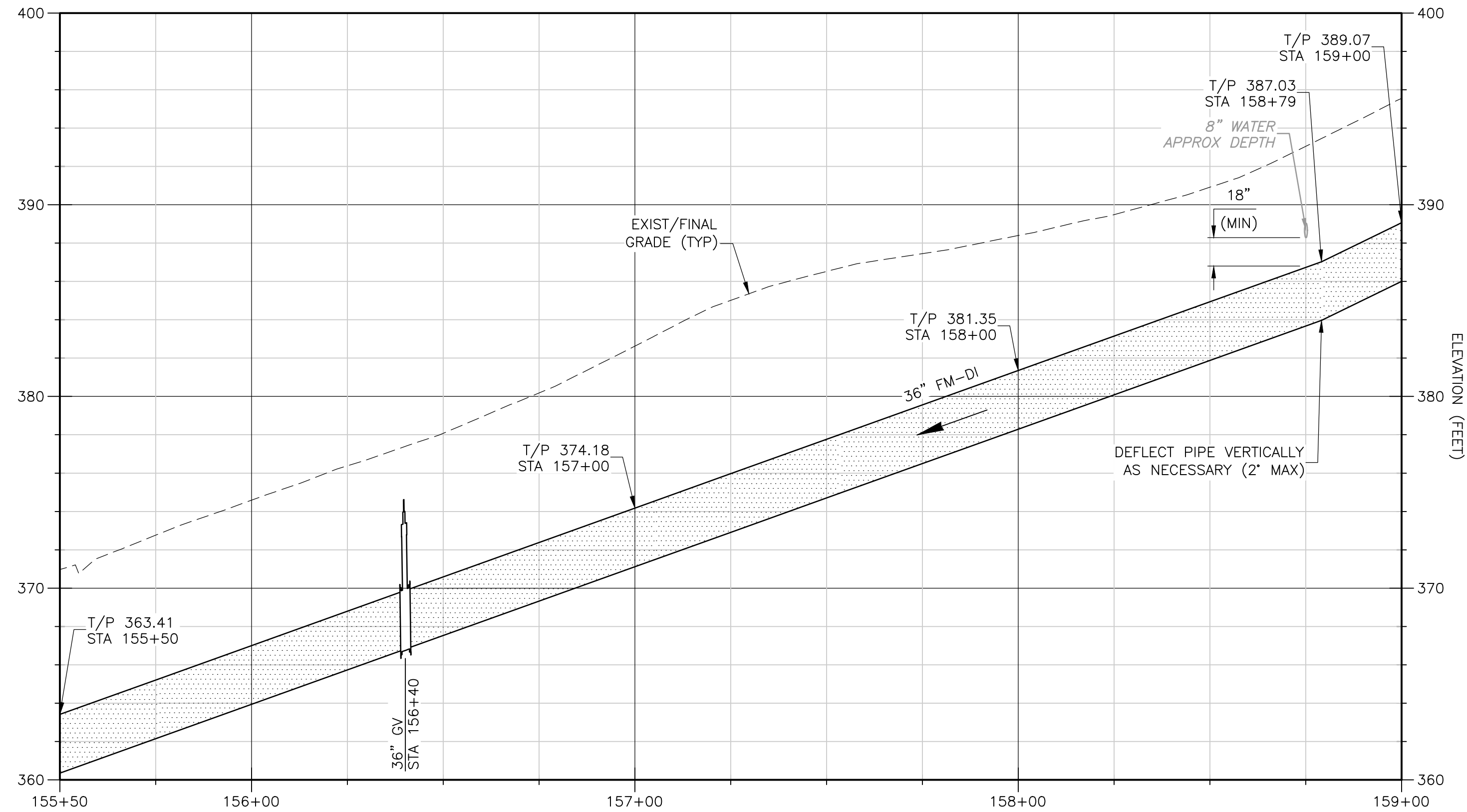
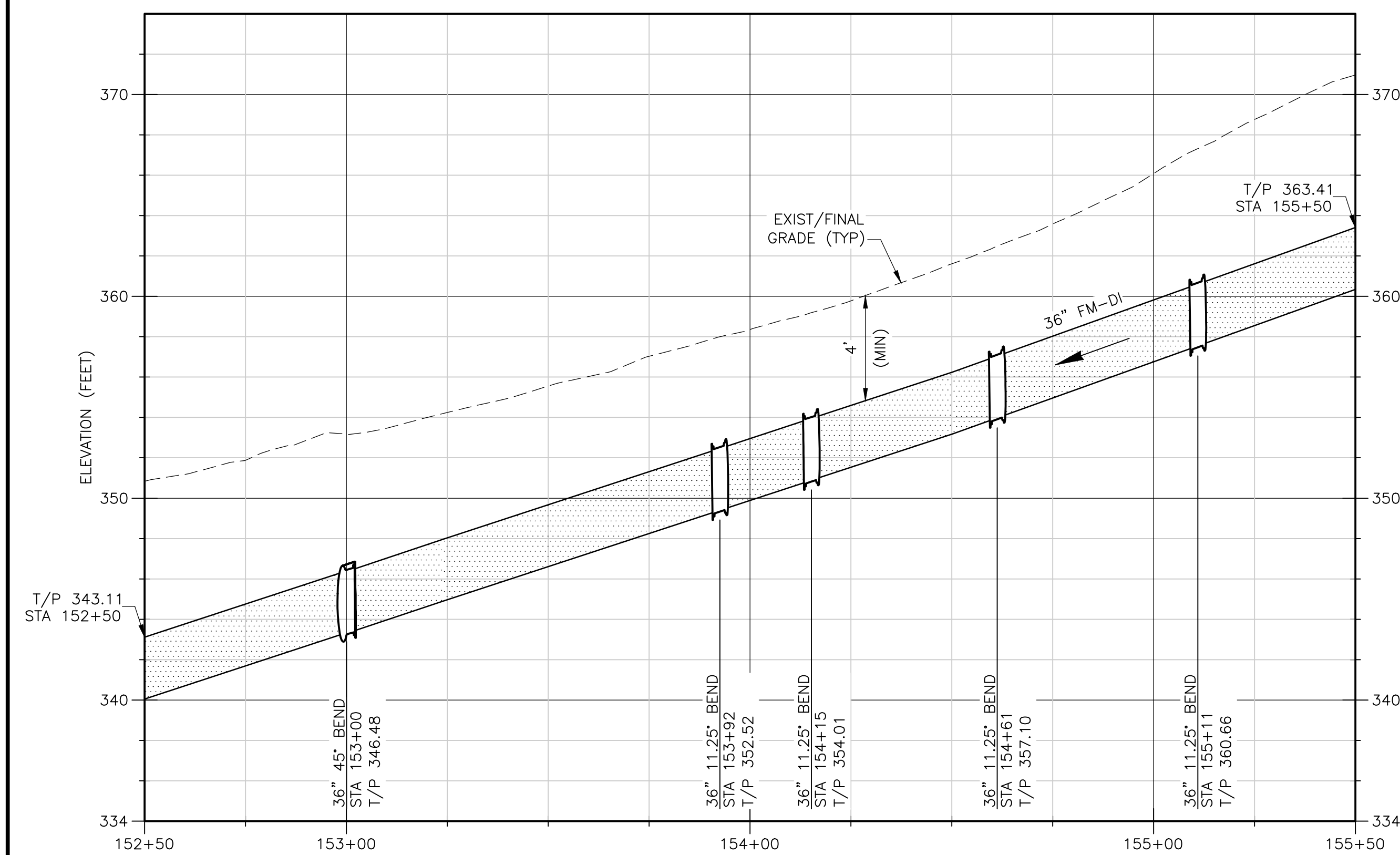
FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

ABBOTSFORD DRIVE
 TO OLD COURTHOUSE ROAD
 PLAN AND PROFILE
 STA 146+00 TO STA 152+50

PROJECT NO. 5003-244105
 FILE NAME: C024FMPP.DWG
 SHEET NO. C-24



- NOTES:
- SEE SHEET ES-15 FOR EROSION AND SEDIMENT CONTROL PLAN.
 - SEE SHEET TP-27 FOR TREE PRESERVATION AND PLANTING PLAN.
 - SEE SHEET MT-3 PHASE 8 AND PHASE 9 PHASING NOTES AND SHEET MT-9 PHASE 9 TRAFFIC CONTROL DETOUR.
 - STORMWATER CROSSING TO BE SUPPORTED FROM ABOVE OR REMOVED AND REINSTALL UP TO TWO LENGTHS OF RCP.



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REV. NO.	DATE	DRWN	CHKD	REMARKS

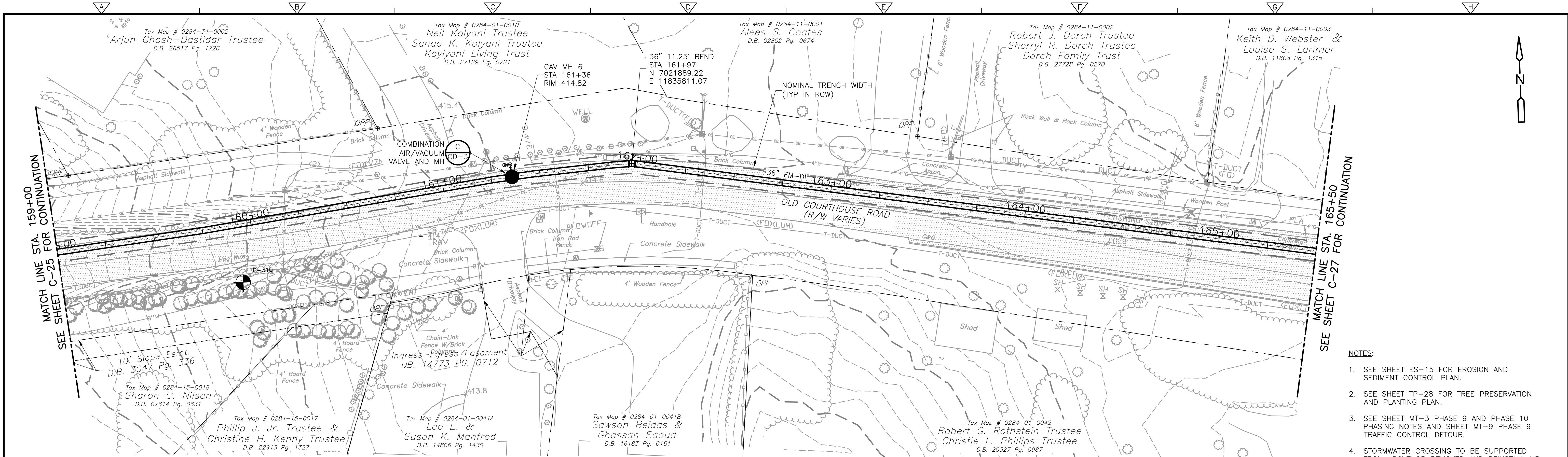
DESIGNED BY: G. THOMAS
 DRAWN BY: C. MILLER
 SHEET CHK'D BY: J. KUNAY
 CROSS CHK'D BY: _____
 APPROVED BY: _____
 DATE: AUGUST 2024



FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

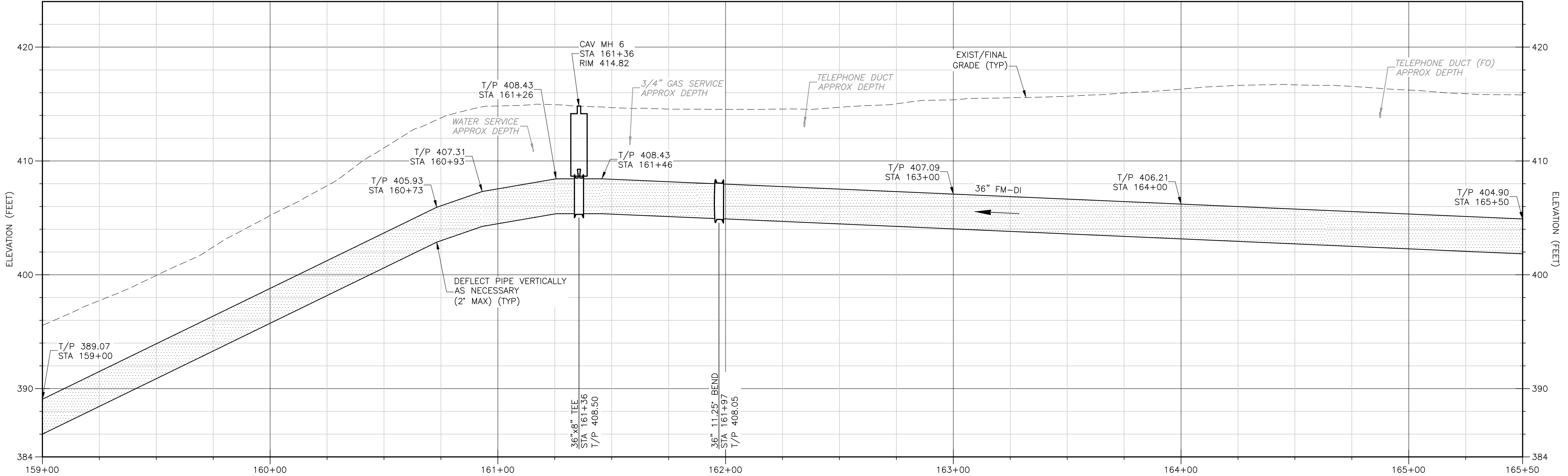
OLD COURTHOUSE ROAD
 PLAN AND PROFILES
 STA 152+50 TO STA 159+00

PROJECT NO. 5003-244105
 FILE NAME: C025FMPP.DWG
 SHEET NO. C-25



PLAN
1" = 25'

- NOTES:**
- SEE SHEET ES-15 FOR EROSION AND SEDIMENT CONTROL PLAN.
 - SEE SHEET TP-28 FOR TREE PRESERVATION AND PLANTING PLAN.
 - SEE SHEET MT-3 PHASE 9 AND PHASE 10 PHASING NOTES AND SHEET MT-9 PHASE 9 TRAFFIC CONTROL DETOUR.
 - STORMWATER CROSSING TO BE SUPPORTED FROM ABOVE OR REMOVED AND REINSTALL UP TO TWO LENGTHS OF RCP.



PROFILE
HORIZONTAL: 1" = 25'
VERTICAL: 1" = 5'

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REV. NO.	DATE	DRWN	CHKD	REMARKS

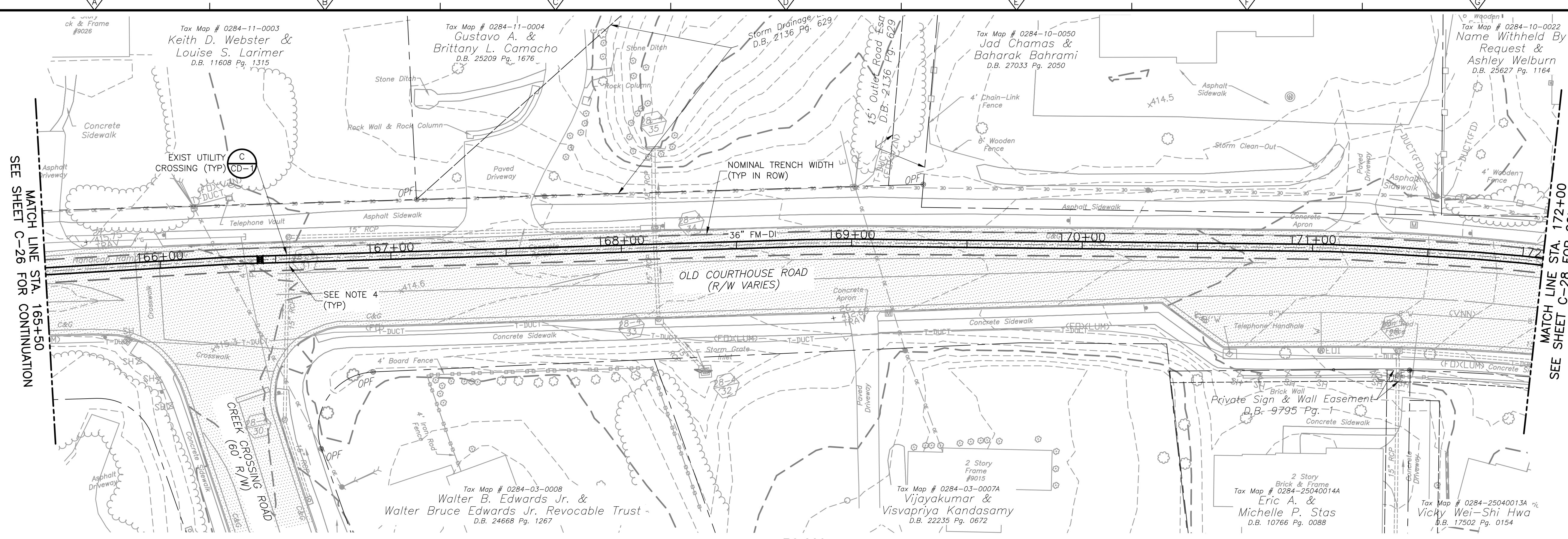
DESIGNED BY:	G. THOMAS
DRAWN BY:	C. MILLER
SHEET CHK'D BY:	J. KUNAY
CROSS CHK'D BY:	
APPROVED BY:	
DATE:	AUGUST 2024



FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

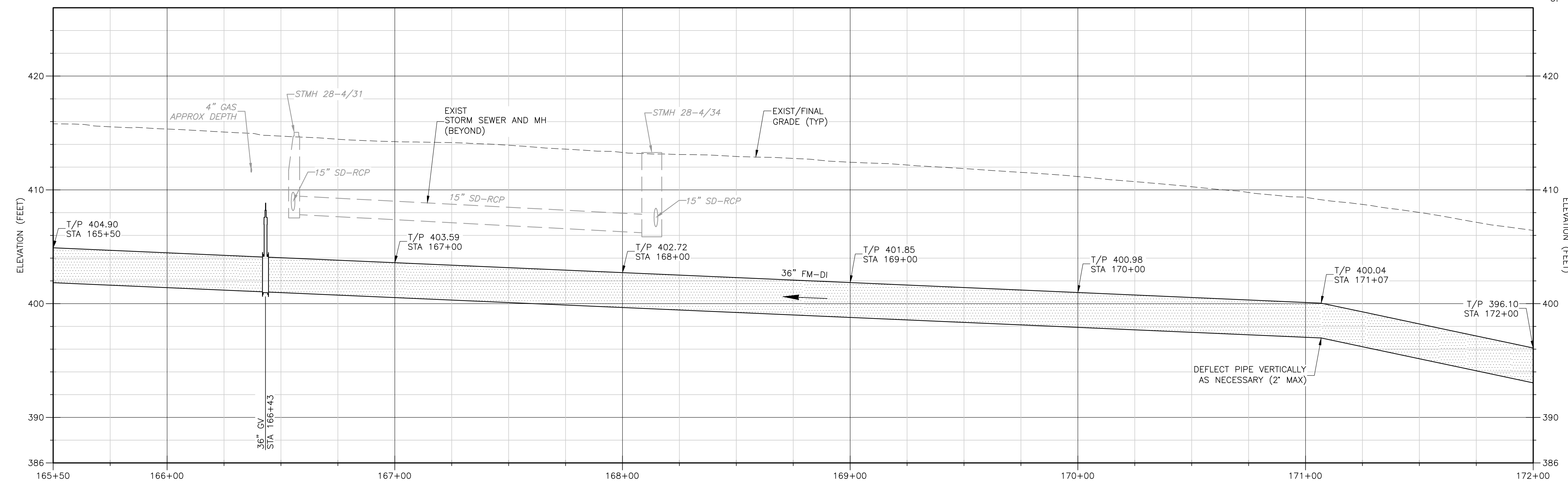
OLD COURTHOUSE ROAD
 PLAN AND PROFILE
 STA 159+00 TO STA 165+50

PROJECT NO.	5003-244105
FILE NAME:	C026FMPP.DWG
SHEET NO.	C-26



PLAN
1" = 25'

- NOTES:**
- SEE SHEET ES-16 FOR EROSION AND SEDIMENT CONTROL PLAN.
 - SEE SHEET TP-29 FOR TREE PRESERVATION AND PLANTING PLAN.
 - SEE SHEET MT-3 PHASE 9 AND PHASE 10 PHASING NOTES AND SHEET MT-9 PHASE 9 TRAFFIC CONTROL DETOUR.
 - STORMWATER CROSSING TO BE SUPPORTED FROM ABOVE OR REMOVED AND REINSTALL UP TO TWO LENGTHS OF RCP.
 - CAUTION, OVERHEAD ELECTRIC (OE).



PROFILE
HORIZONTAL: 1" = 25'
VERTICAL: 1" = 5'

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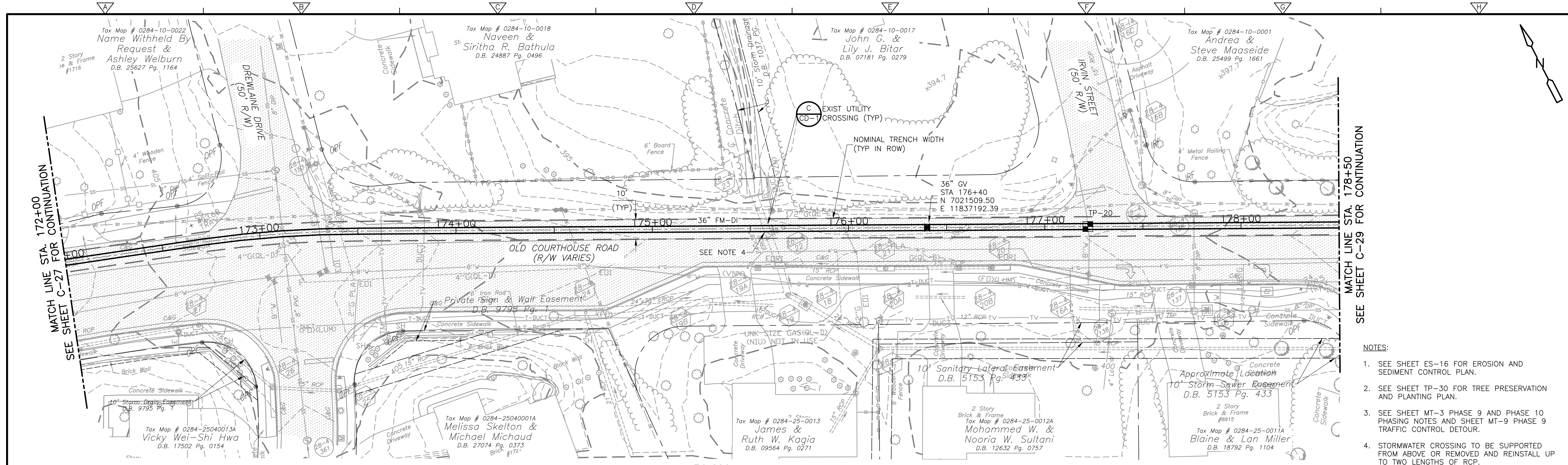
REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY:	G. THOMAS
DRAWN BY:	C. MILLER
SHEET CHK'D BY:	J. KUNAY
CROSS CHK'D BY:	
APPROVED BY:	
DATE:	AUGUST 2024

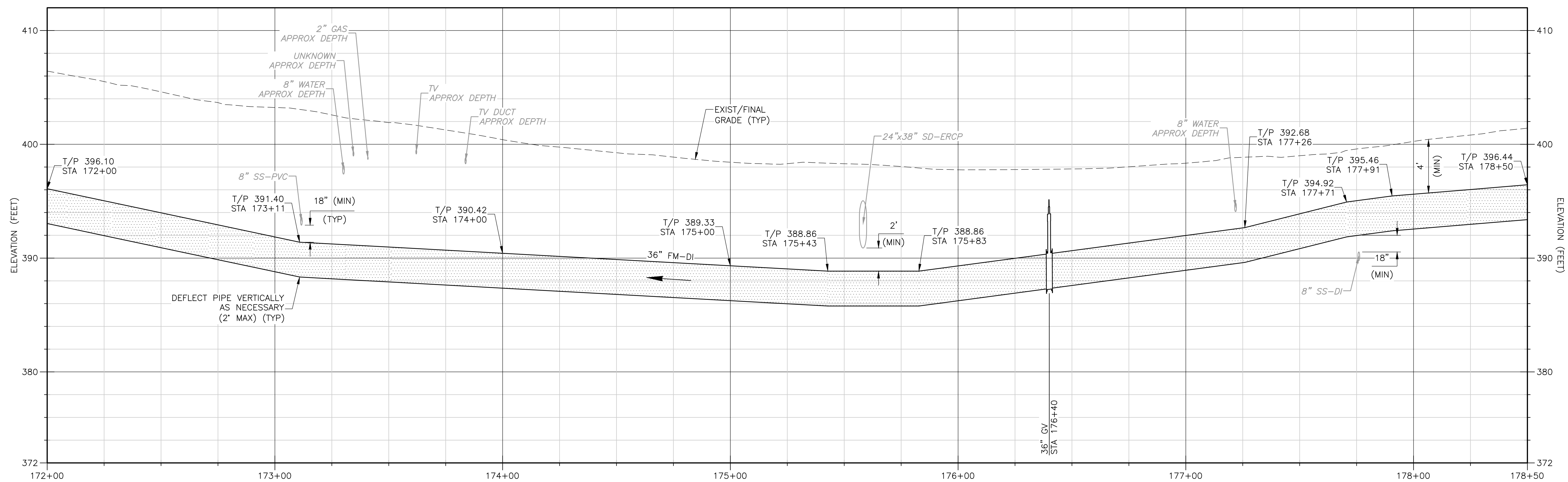


FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
MODIFICATIONS
 PACKAGE 4: FORCE MAIN

PROJECT NO. 5003-244105
 FILE NAME: C027FMPP.DWG
 SHEET NO.
C-27



PLAN
1" = 25'



PROFILE
HORIZONTAL: 1" = 25'
VERTICAL: 1" = 5'

MATCH LINE STA. 178+50
SEE SHEET C-29 FOR CONTINUATION

- NOTES:**
- SEE SHEET ES-16 FOR EROSION AND SEDIMENT CONTROL PLAN.
 - SEE SHEET TP-30 FOR TREE PRESERVATION AND PLANTING PLAN.
 - SEE SHEET MT-3 PHASE 9 AND PHASE 10 PHASING NOTES AND SHEET MT-9 PHASE 9 TRAFFIC CONTROL DETOUR.
 - STORMWATER CROSSING TO BE SUPPORTED FROM ABOVE OR REMOVED AND REINSTALL UP TO TWO LENGTHS OF RCP.
 - CAUTION, OVERHEAD ELECTRIC (OE).

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REV. NO.	DATE	DRWN	CHKD	REMARKS

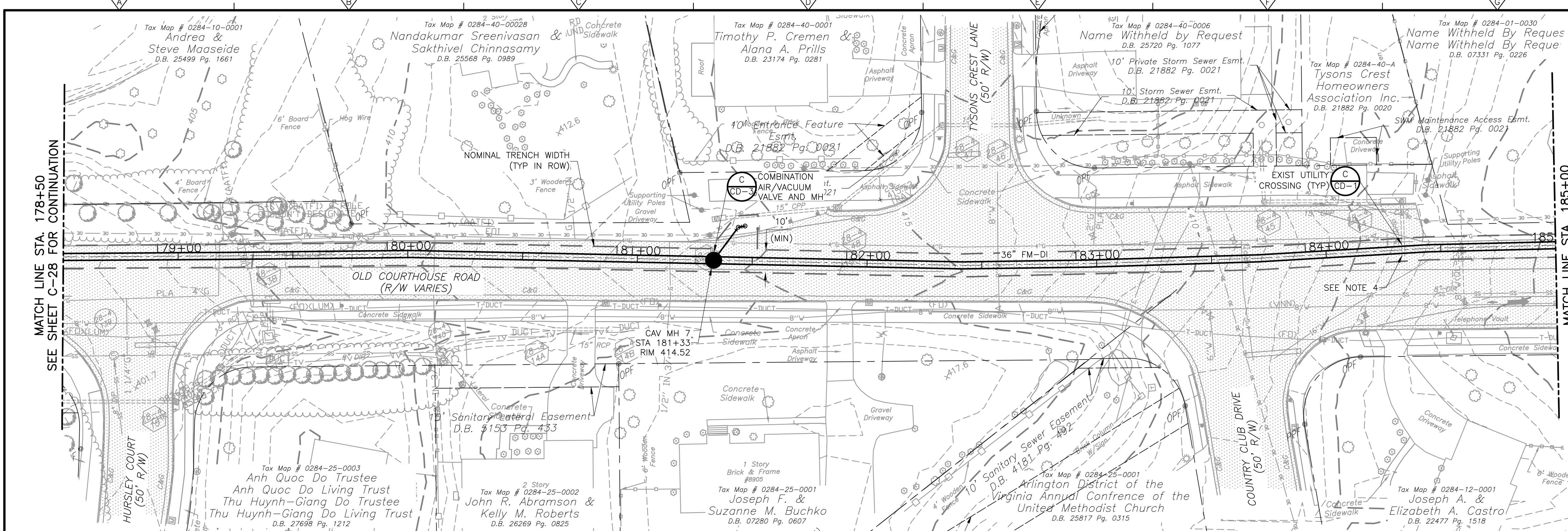
DESIGNED BY:	G. THOMAS
DRAWN BY:	C. MILLER
SHEET CHK'D BY:	J. KUNAY
CROSS CHK'D BY:	
APPROVED BY:	
DATE:	AUGUST 2024

CDM Smith
 10306 Eaton Place, Suite 220
 Fairfax, VA 22030
 Tel: (703) 691-6500

FAIRFAX COUNTY, VIRGINIA
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 TYSONS WASTEWATER CONVEYANCE SYSTEM
MODIFICATIONS
 PACKAGE 4: FORCE MAIN

OLD COURTHOUSE ROAD
PLAN AND PROFILE
 STA 172+00 TO STA 178+50

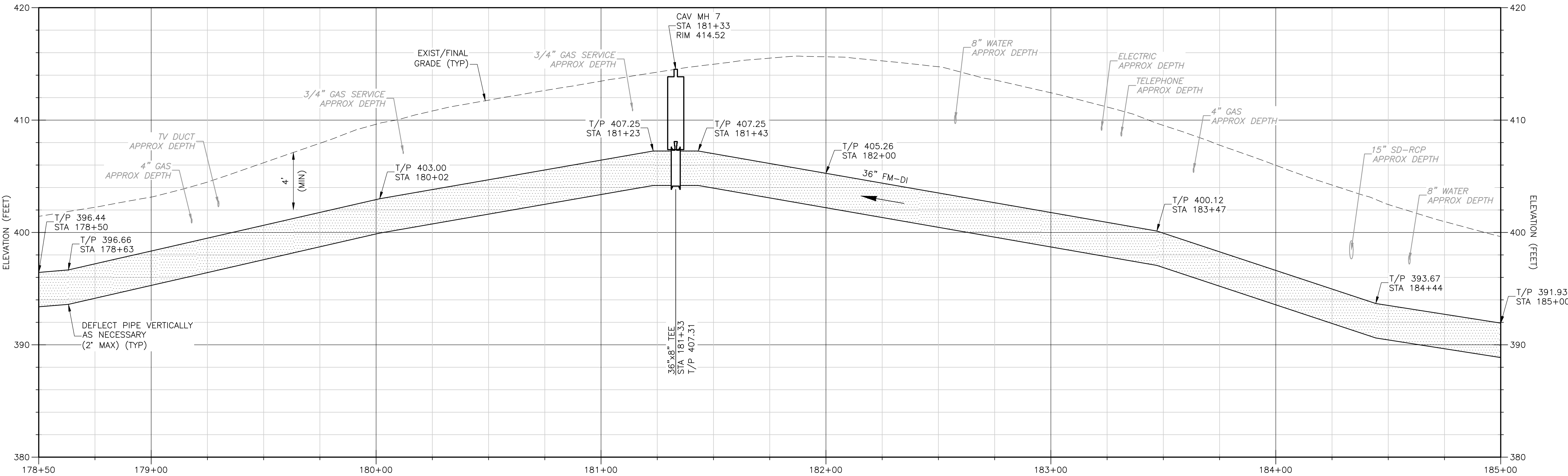
PROJECT NO.	5003-244105
FILE NAME:	C028FMPP.DWG
SHEET NO.	C-28



PLAN
1" = 25'

SEE SHEET C-28 FOR CONTINUATION

- NOTES:**
- SEE SHEET ES-17 FOR EROSION AND SEDIMENT CONTROL PLAN.
 - SEE SHEET TP-31 FOR TREE PRESERVATION AND PLANTING PLAN.
 - SEE SHEET MT-3 PHASE 9 AND PHASE 10 PHASING NOTES AND SHEET MT-9, PHASE 9 TRAFFIC CONTROL DETOUR.
 - STORMWATER CROSSING TO BE SUPPORTED FROM ABOVE OR REMOVED AND REINSTALL UP TO TWO LENGTHS OF RCP.



PROFILE
HORIZONTAL: 1" = 25'
VERTICAL: 1" = 5'

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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY:	G. THOMAS
DRAWN BY:	C. MILLER
SHEET CHK'D BY:	J. KUNAY
CROSS CHK'D BY:	
APPROVED BY:	
DATE:	AUGUST 2024



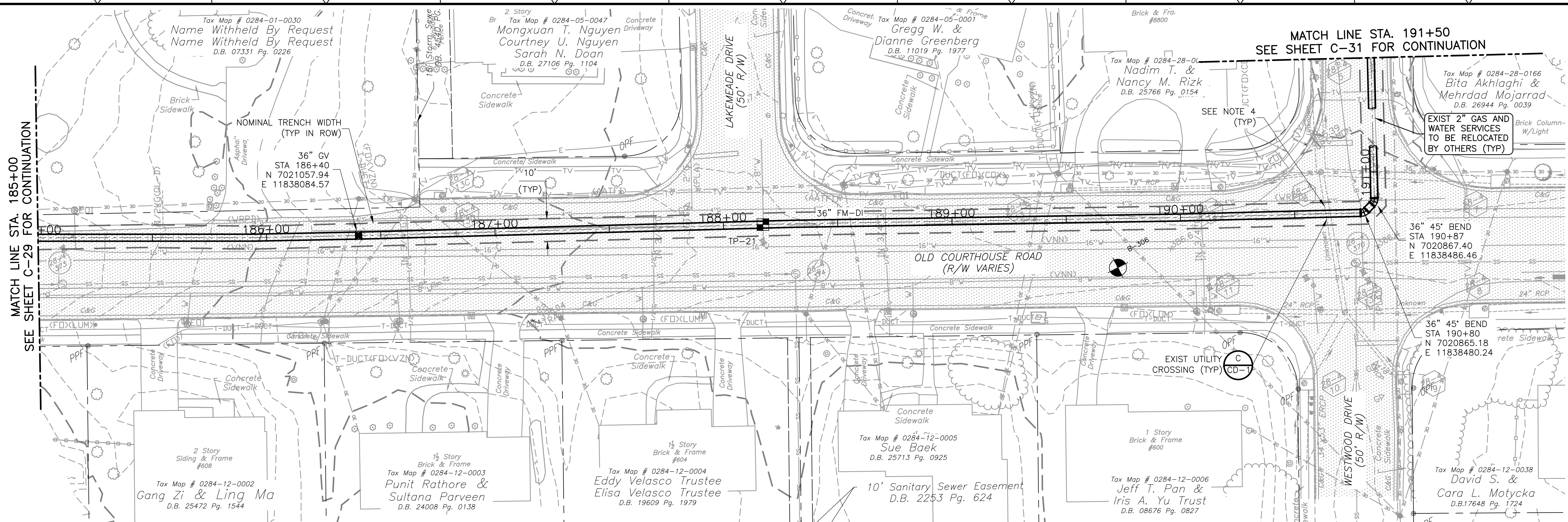
FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

OLD COURTHOUSE ROAD
 PLAN AND PROFILE
 STA 178+50 TO STA 185+00

PROJECT NO.	5003-244105
FILE NAME:	C029FMPP.DWG
SHEET NO.	C-29

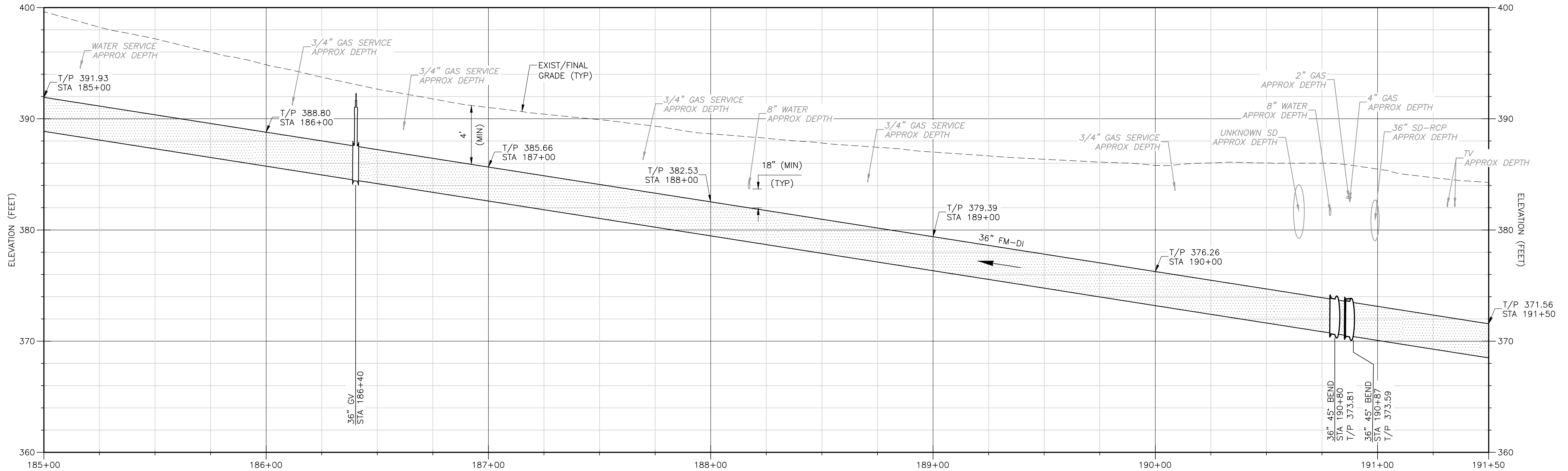
MATCH LINE STA. 185+00
SEE SHEET C-29 FOR CONTINUATION

MATCH LINE STA. 191+50
SEE SHEET C-31 FOR CONTINUATION



PLAN
1" = 25'

- NOTES:
- SEE SHEET ES-17 FOR EROSION AND SEDIMENT CONTROL PLAN.
 - SEE SHEET TP-32 FOR TREE PRESERVATION AND PLANTING PLAN.
 - SEE SHEET MT-3 PHASE 9 AND PHASE 10 PHASING NOTES AND SHEET MT-9, PHASE 9 TRAFFIC CONTROL DETOUR.
 - STORMWATER CROSSING TO BE SUPPORTED FROM ABOVE OR REMOVED AND REINSTALL UP TO TWO LENGTHS OF RCP.



PROFILE
HORIZONTAL: 1" = 25'
VERTICAL: 1" = 5'

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REV. NO.	DATE	DRWN	CHKD	REMARKS

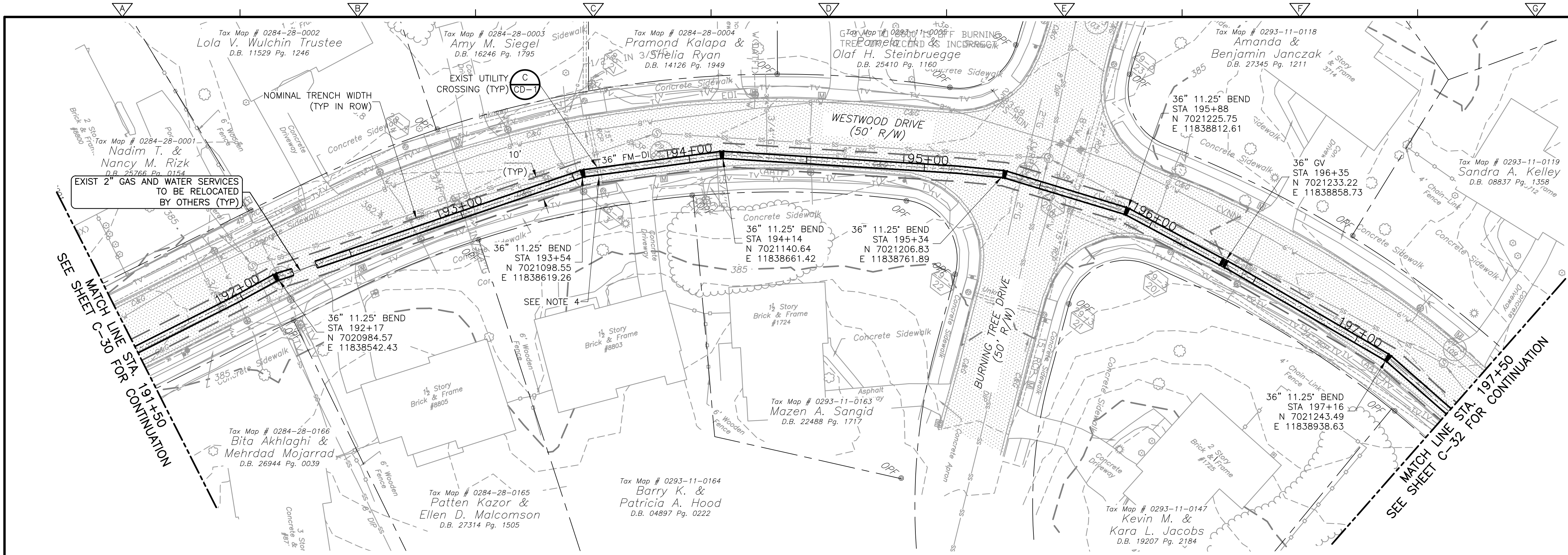
DESIGNED BY: G. THOMAS
 DRAWN BY: C. MILLER
 SHEET CHK'D BY: J. KUNAY
 CROSS CHK'D BY: _____
 APPROVED BY: _____
 DATE: AUGUST 2024



FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

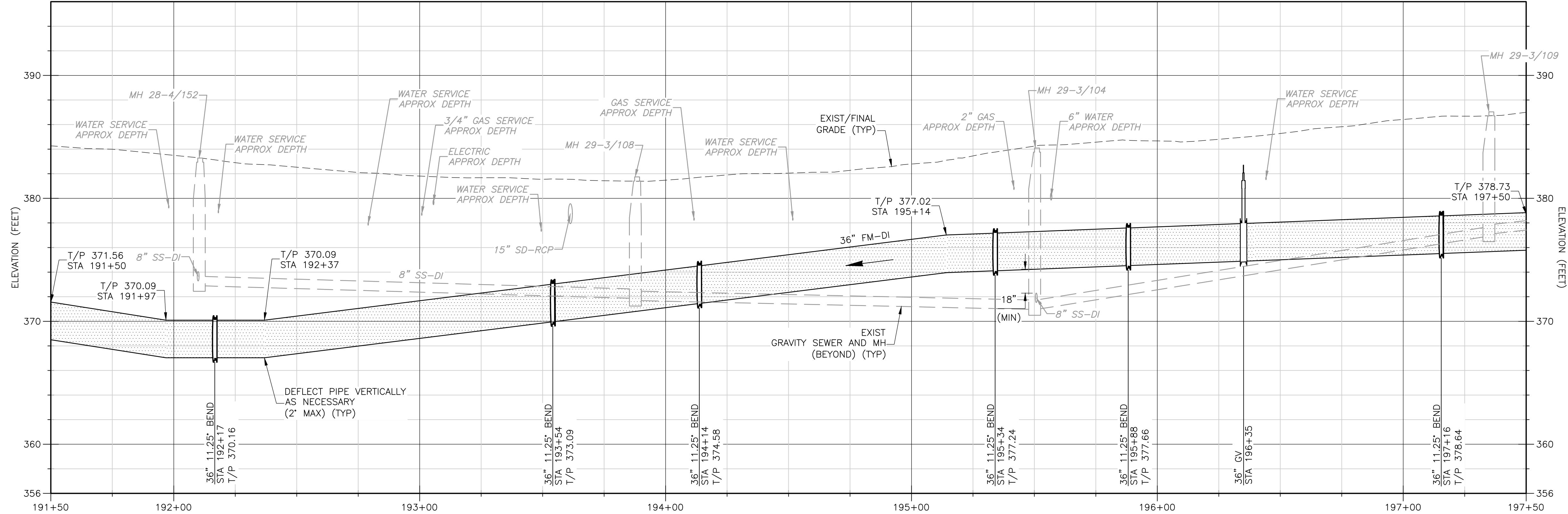
OLD COURTHOUSE ROAD
 AND WESTWOOD DRIVE
 PLAN AND PROFILE
 STA 185+00 TO STA 191+50

PROJECT NO.	5003-244105
FILE NAME:	C030FMPP.DWG
SHEET NO.	C-30



- NOTES:**
1. SEE SHEET ES-18 FOR EROSION AND SEDIMENT CONTROL PLAN.
 2. SEE SHEET TP-33 FOR TREE PRESERVATION AND PLANTING PLAN.
 3. SEE SHEET MT-3 PHASE 11 PHASING NOTES.
 4. STORMWATER CROSSING TO BE SUPPORTED FROM ABOVE OR REMOVED AND REINSTALL UP TO TWO LENGTHS OF RCP.

PLAN
1" = 25'



PROFILE
HORIZONTAL: 1" = 25'
VERTICAL: 1" = 5'

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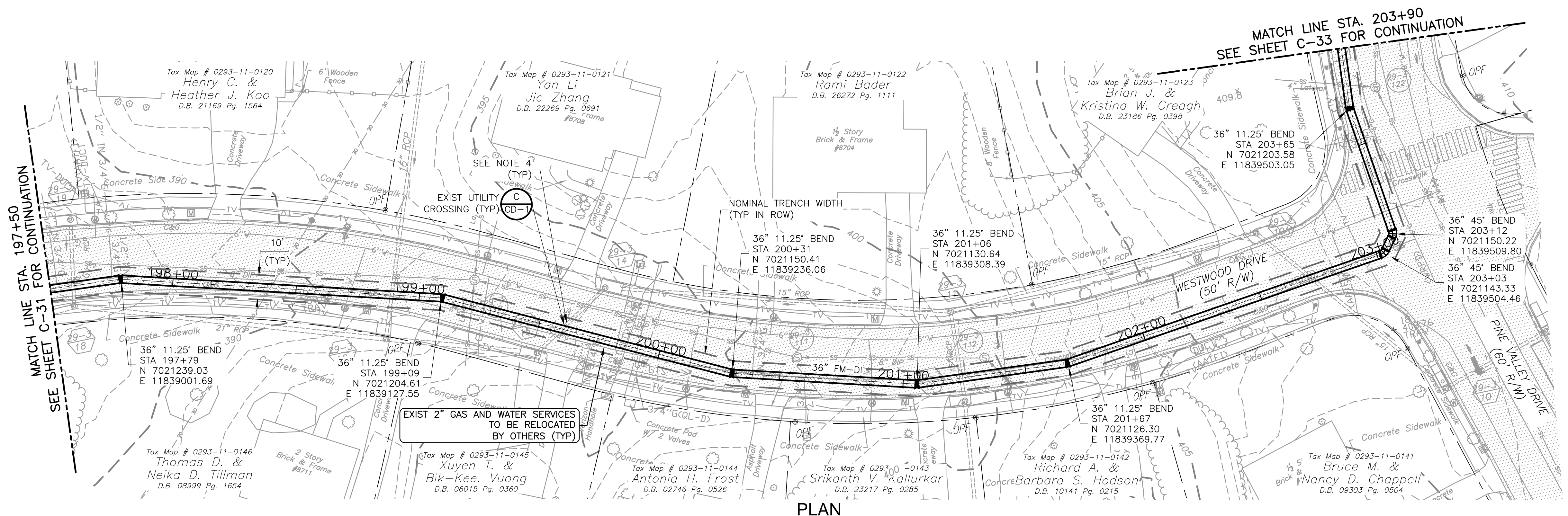
REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: G. THOMAS
DRAWN BY: C. MILLER
SHEET CHK'D BY: J. KUNAY
CROSS CHK'D BY: _____
APPROVED BY: _____
DATE: AUGUST 2024

FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
MODIFICATIONS
 PACKAGE 4: FORCE MAIN

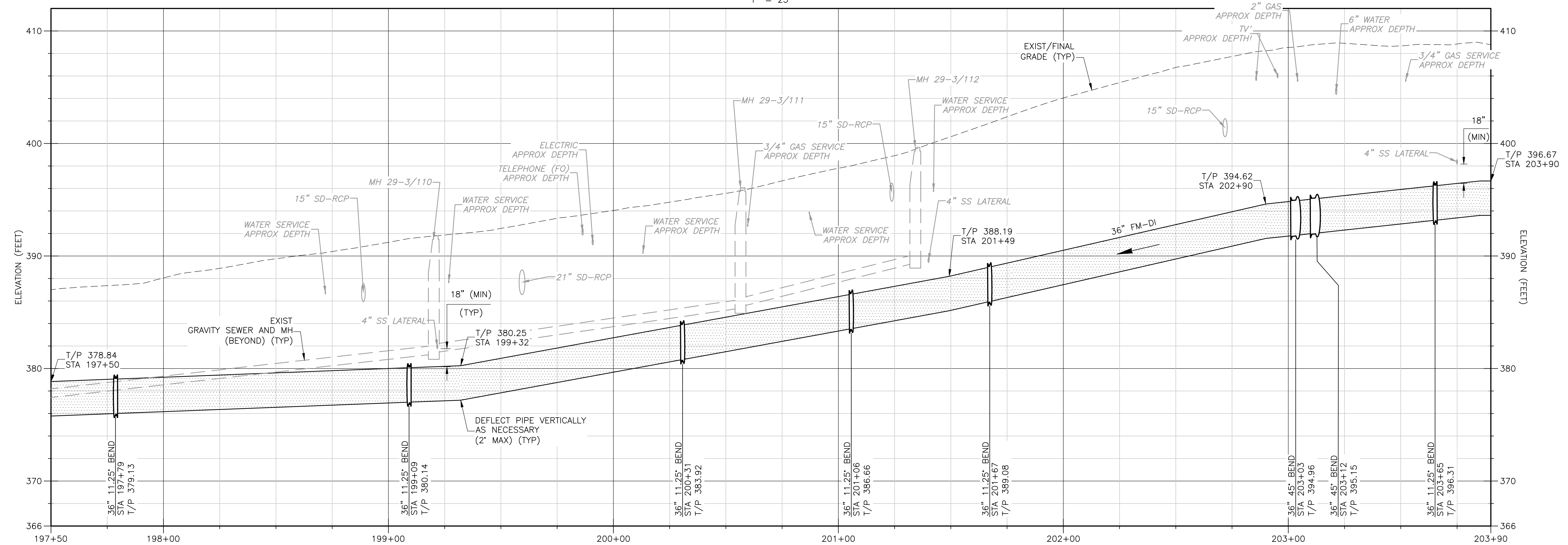
WESTWOOD DRIVE
 PLAN AND PROFILE
 STA 191+50 TO STA 197+50

PROJECT NO. 5003-244105
FILE NAME: C031FMPP.DWG
SHEET NO. C-31



- NOTES:**
- SEE SHEET ES-18 FOR EROSION AND SEDIMENT CONTROL PLAN.
 - SEE SHEET TP-34 FOR TREE PRESERVATION AND PLANTING PLAN.
 - SEE SHEET MT-3 PHASE 11 PHASING NOTES.
 - STORMWATER CROSSING TO BE SUPPORTED FROM ABOVE OR REMOVED AND REINSTALL UP TO TWO LENGTHS OF RCP.

PLAN
1" = 25'



PROFILE
HORIZONTAL: 1" = 25'
VERTICAL: 1" = 5'

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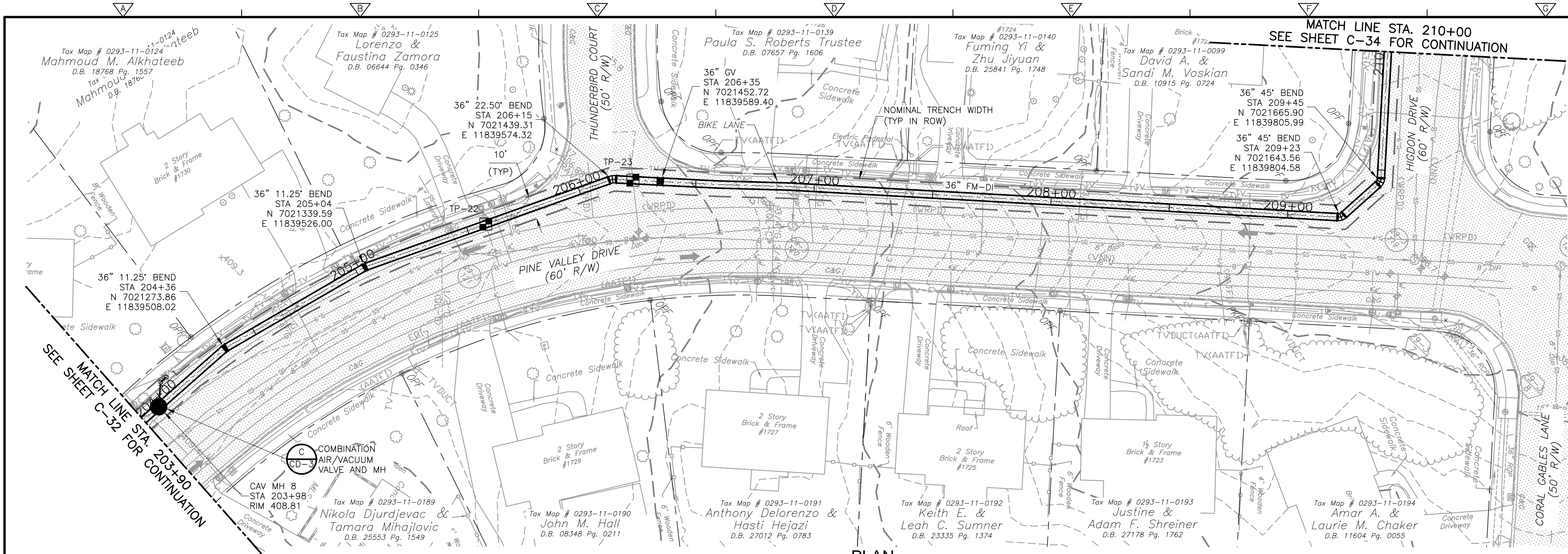
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 DRAWN BY: C. MILLER
 SHEET CHK'D BY: J. KUNAY
 CROSS CHK'D BY: _____
 APPROVED BY: _____
 DATE: AUGUST 2024



FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

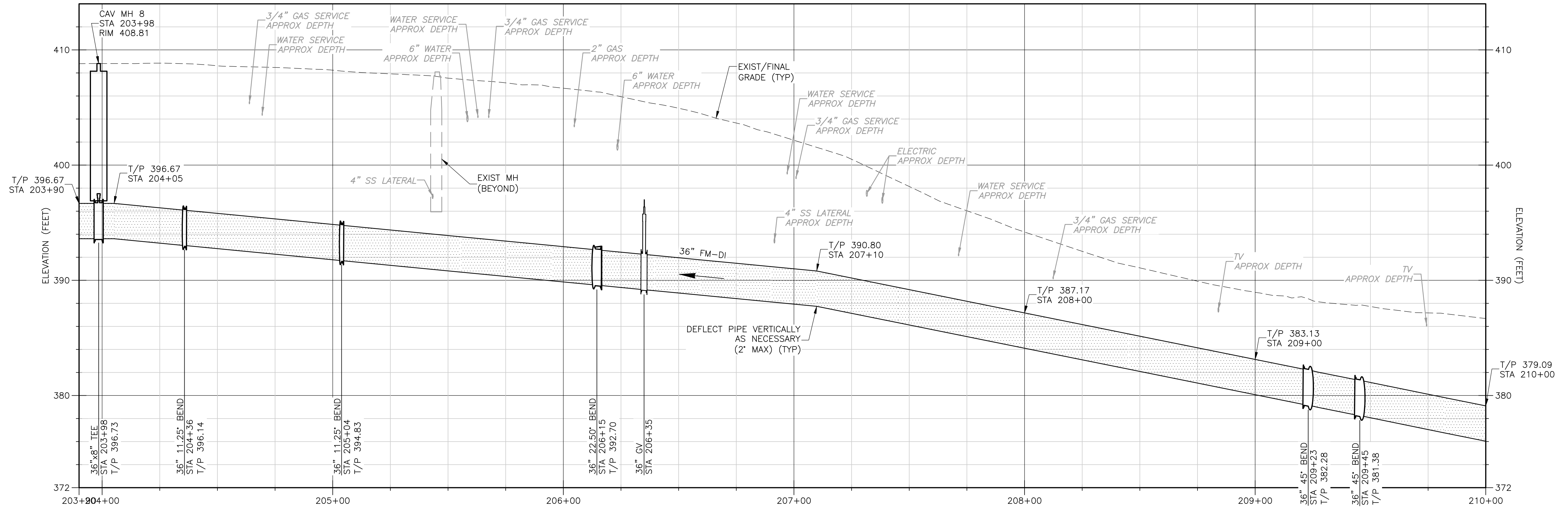
WESTWOOD DRIVE
 AND PINE VALLEY DRIVE
 PLAN AND PROFILE
 STA 197+50 TO STA 203+90

PROJECT NO. 5003-244105
 FILE NAME: C032FMPP.DWG
 SHEET NO. C-32



PLAN
1" = 25'

- NOTES:**
- SEE SHEET ES-19 FOR EROSION AND SEDIMENT CONTROL PLAN.
 - SEE SHEET TP-35 FOR TREE PRESERVATION AND PLANTING PLAN.
 - SEE SHEET MT-3 PHASE 11 PHASING NOTES.
 - STORMWATER CROSSING TO BE SUPPORTED FROM ABOVE OR REMOVED AND REINSTALL UP TO TWO LENGTHS OF RCP.



PROFILE
HORIZONTAL: 1" = 25'
VERTICAL: 1" = 5'

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: G. THOMAS
DRAWN BY: C. MILLER
SHEET CHK'D BY: J. KUNAY
CROSS CHK'D BY:
APPROVED BY:
DATE: AUGUST 2024



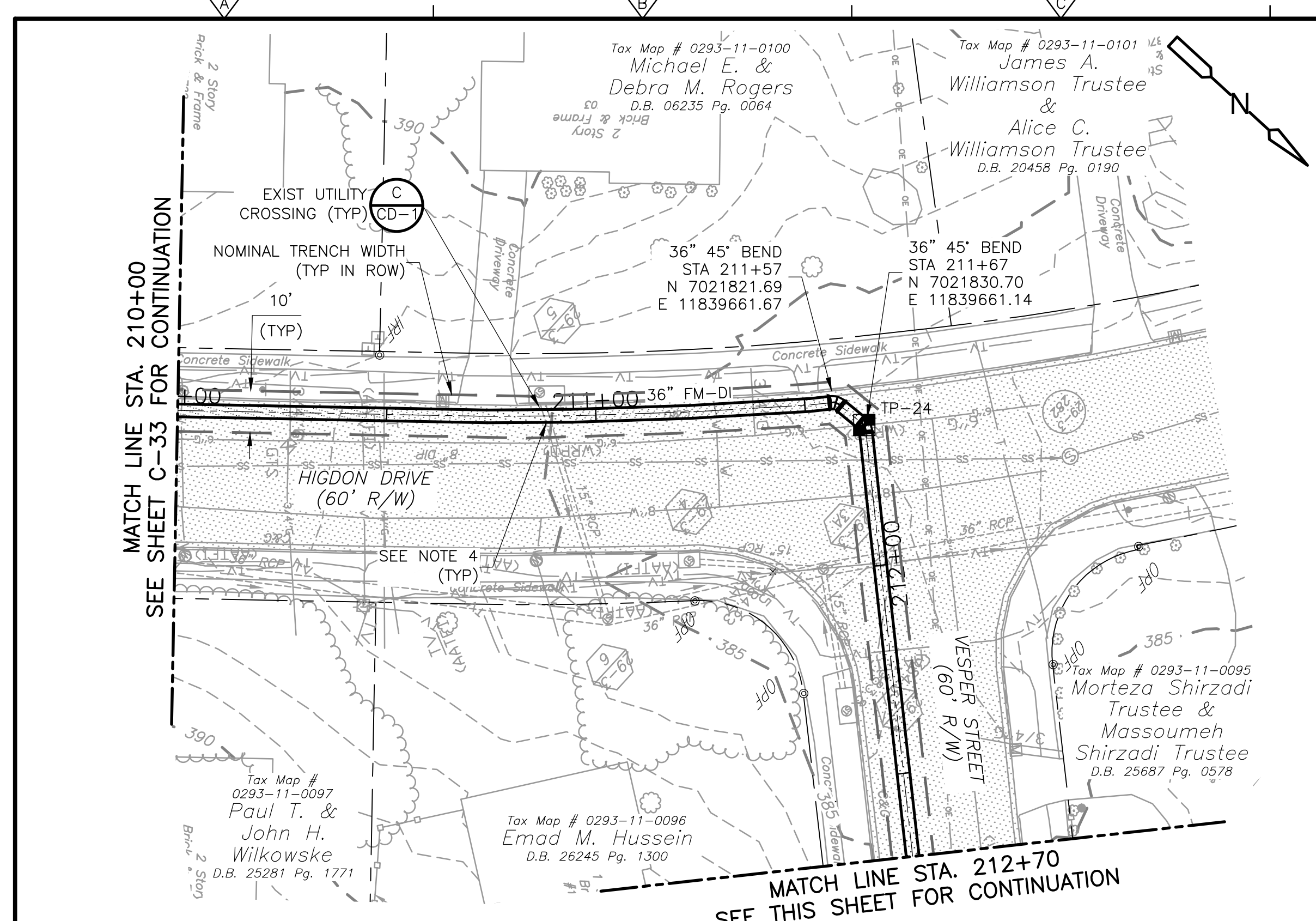
FAIRFAX COUNTY, VIRGINIA
DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
TYSONS WASTEWATER CONVEYANCE SYSTEM
MODIFICATIONS
PACKAGE 4: FORCE MAIN

PINE VALLEY DRIVE AND HIGDON DRIVE
PLAN AND PROFILE
STA 203+90 TO STA 210+00

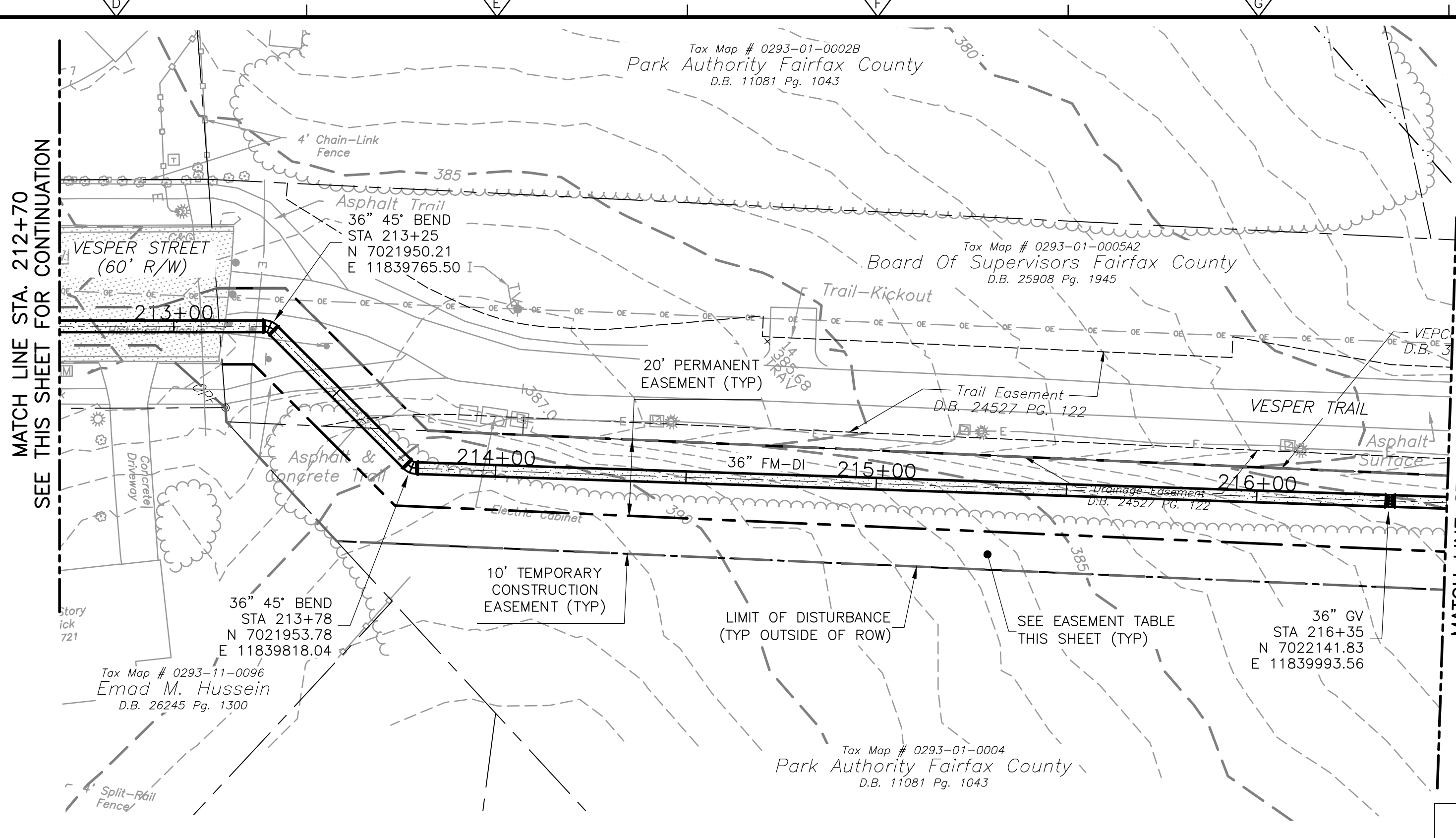
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FILE NAME: C033FMPP.DWG
SHEET NO. C-33

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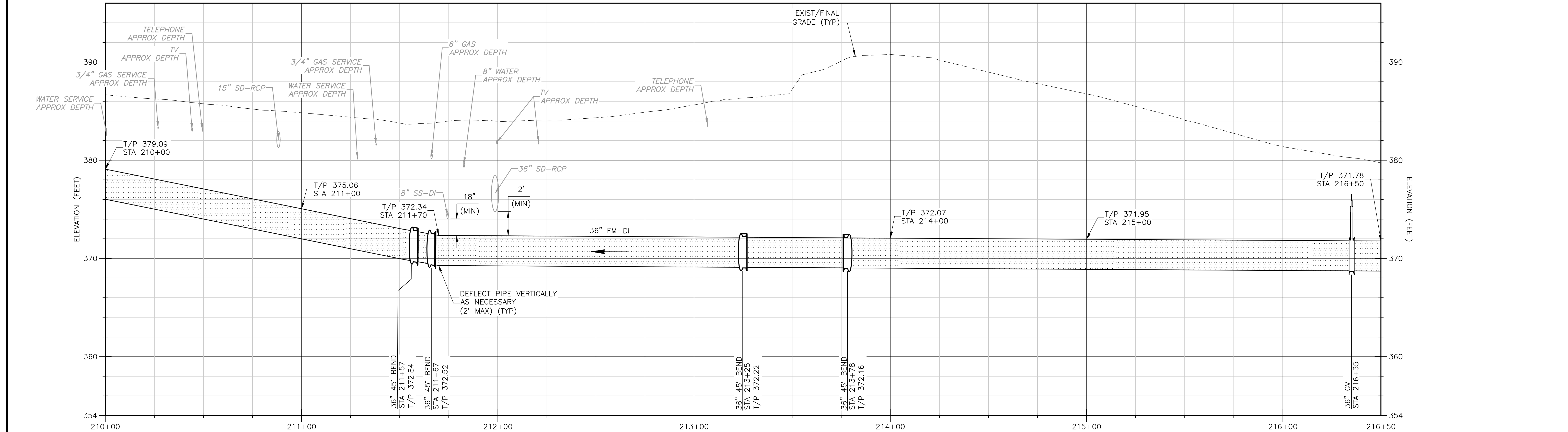
PLAN
1" = 25'



PLAN
1" = 25'

- NOTES:**
- SEE SHEET ES-19 FOR EROSION AND SEDIMENT CONTROL PLAN.
 - SEE SHEET TP-36 FOR TREE PRESERVATION AND PLANTING PLAN.
 - SEE SHEET MT-3 PHASE 11 PHASING NOTES.
 - STORMWATER CROSSING TO BE SUPPORTED FROM ABOVE OR REMOVED AND REINSTALL UP TO TWO LENGTHS OF RCP.

EASEMENT TABLE	
OWNER	TAX MAP NUMBER
PARK AUTHORITY FAIRFAX COUNTY	TM 029-3-01-0004



PROFILE
HORIZONTAL: 1" = 25'
VERTICAL: 1" = 5'

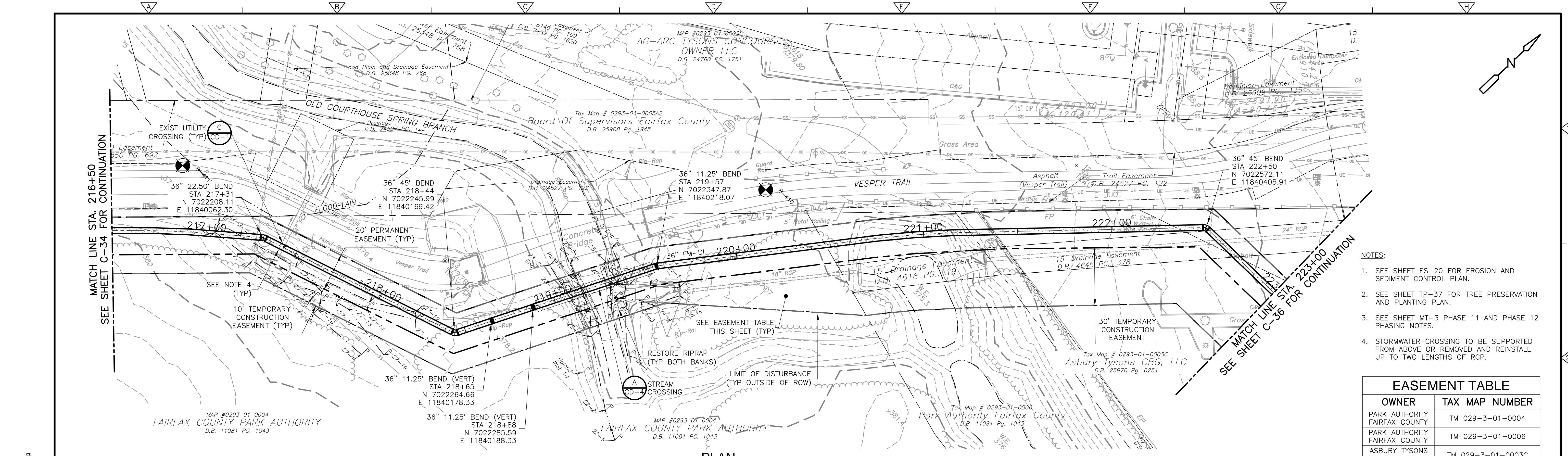
REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY:	G. THOMAS
DRAWN BY:	C. MILLER
SHEET CHK'D BY:	J. KUNAY
CROSS CHK'D BY:	
APPROVED BY:	
DATE:	AUGUST 2024

FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
MODIFICATIONS
 PACKAGE 4: FORCE MAIN

PROJECT NO. 5003-244105
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 SHEET NO.
C-34

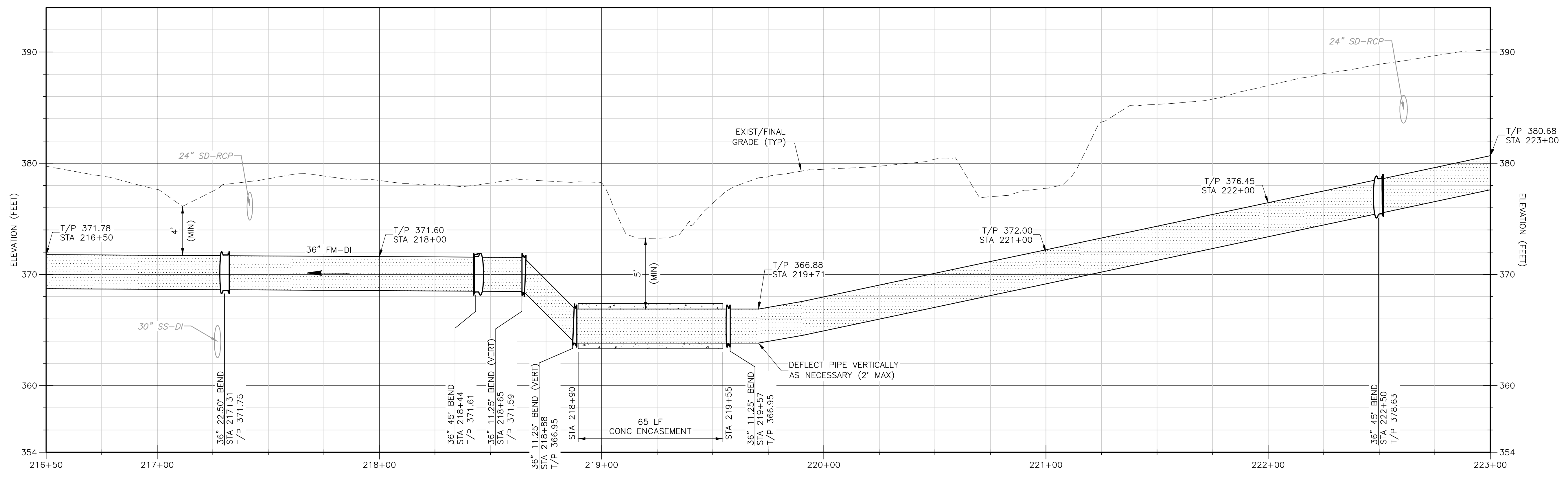
PROJECT NO. 5003-244105
 FILE NAME: C034FMPP.DWG
 SHEET NO.
C-34



- NOTES:
- SEE SHEET ES-20 FOR EROSION AND SEDIMENT CONTROL PLAN.
 - SEE SHEET TP-37 FOR TREE PRESERVATION AND PLANTING PLAN.
 - SEE SHEET MT-3 PHASE 11 AND PHASE 12 PHASING NOTES.
 - STORMWATER CROSSING TO BE SUPPORTED FROM ABOVE OR REMOVED AND REINSTALL UP TO TWO LENGTHS OF RCP.

EASEMENT TABLE	
OWNER	TAX MAP NUMBER
PARK AUTHORITY FAIRFAX COUNTY	TM 029-3-01-0004
PARK AUTHORITY FAIRFAX COUNTY	TM 029-3-01-0006
ASBURY TYSONS CBG, LLC	TM 029-3-01-0003C

PLAN
1" = 25'



PROFILE
HORIZONTAL: 1" = 25'
VERTICAL: 1" = 5'

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DESIGNED BY: C. THOMAS
 DRAWN BY: C. MILLER
 SHEET CHK'D BY: J. KUNAY
 CROSS CHK'D BY:
 APPROVED BY:
 DATE: AUGUST 2024



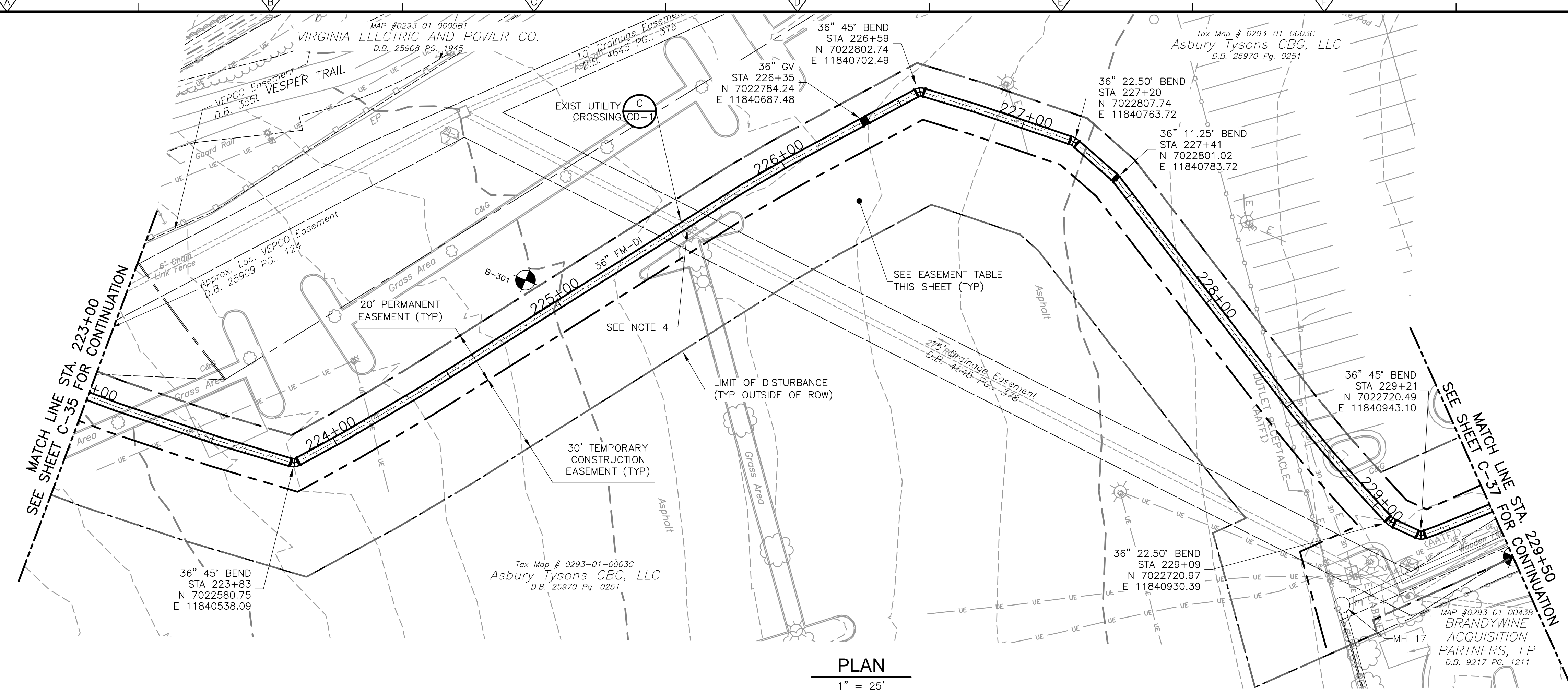
FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

VESPER TRAIL
 PLAN AND PROFILE
 STA 216+50 TO STA 223+00

PROJECT NO. 5003-244105
 FILE NAME: C035FMPP.DWG
 SHEET NO. C-35

REV. NO.	DATE	DRWN	CHKD	REMARKS

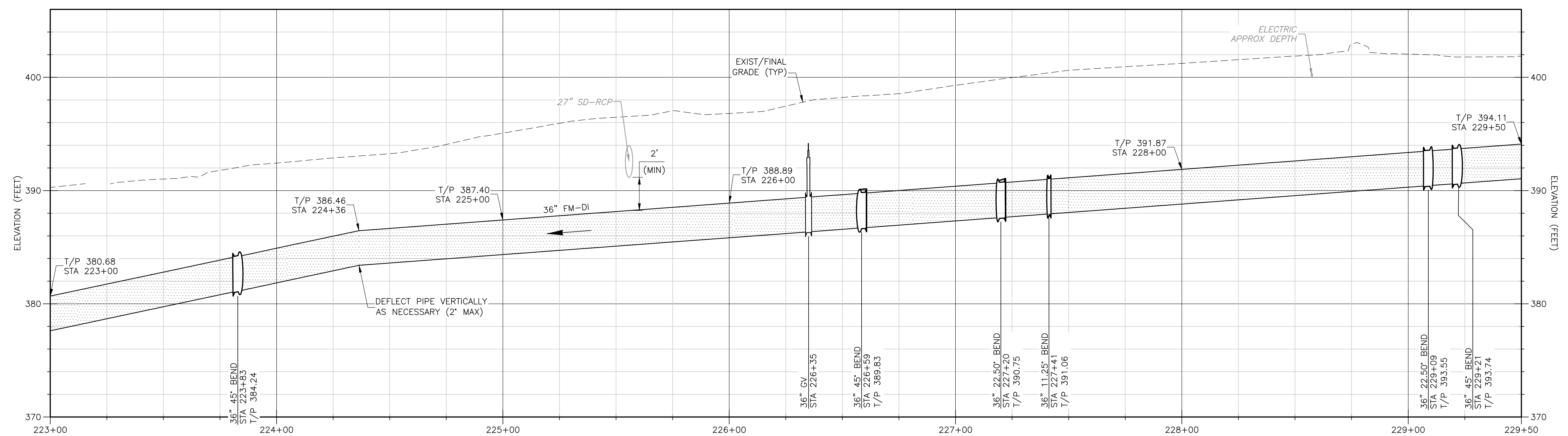
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- NOTES:**
- SEE SHEET ES-20 FOR EROSION AND SEDIMENT CONTROL PLAN.
 - SEE SHEET TP-38 FOR TREE PRESERVATION AND PLANTING PLAN.
 - SEE SHEET MT-3 PHASE 12 PHASING NOTES.
 - STORMWATER CROSSING TO BE SUPPORTED FROM ABOVE OR REMOVED AND REINSTALL UP TO TWO LENGTHS OF RCP.

EASEMENT TABLE	
OWNER	TAX MAP NUMBER
ASBURY TYSONS CBG, LLC	TM 029-3-01-0003C

PLAN
1" = 25'



PROFILE
HORIZONTAL: 1" = 25'
VERTICAL: 1" = 5'

REV. NO.	DATE	DRWN	CHKD	REMARKS

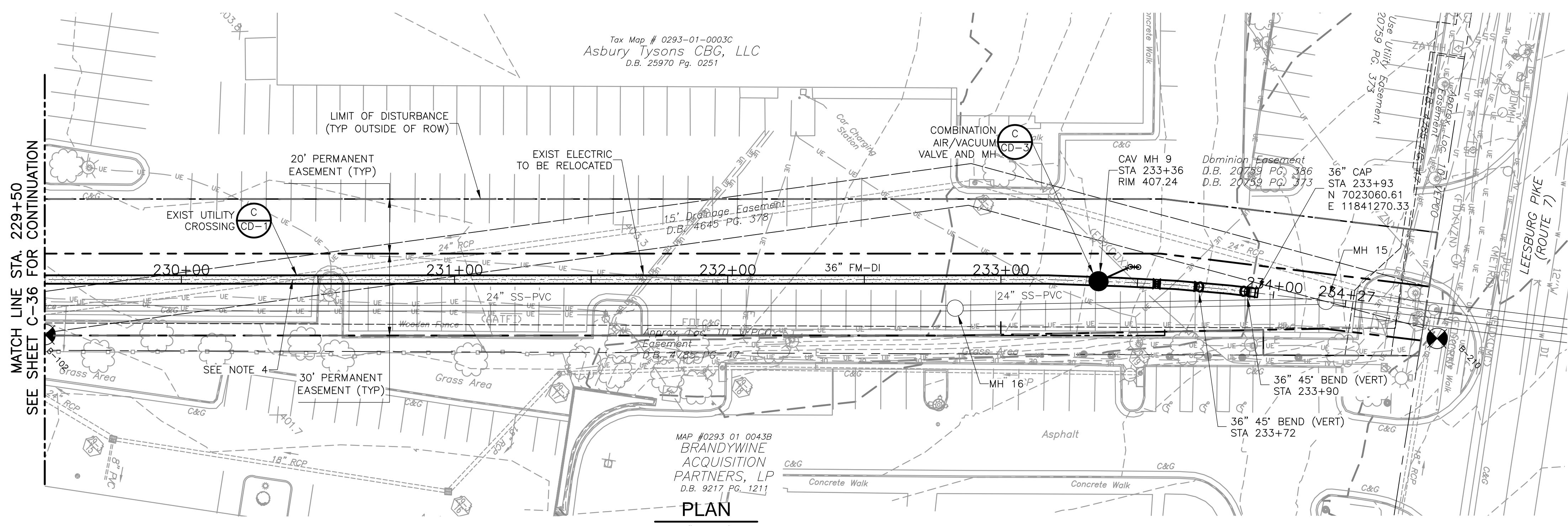
DESIGNED BY: G. THOMAS
DRAWN BY: C. MILLER
SHEET CHK'D BY: J. KUNAY
CROSS CHK'D BY: _____
APPROVED BY: _____
DATE: AUGUST 2024



FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

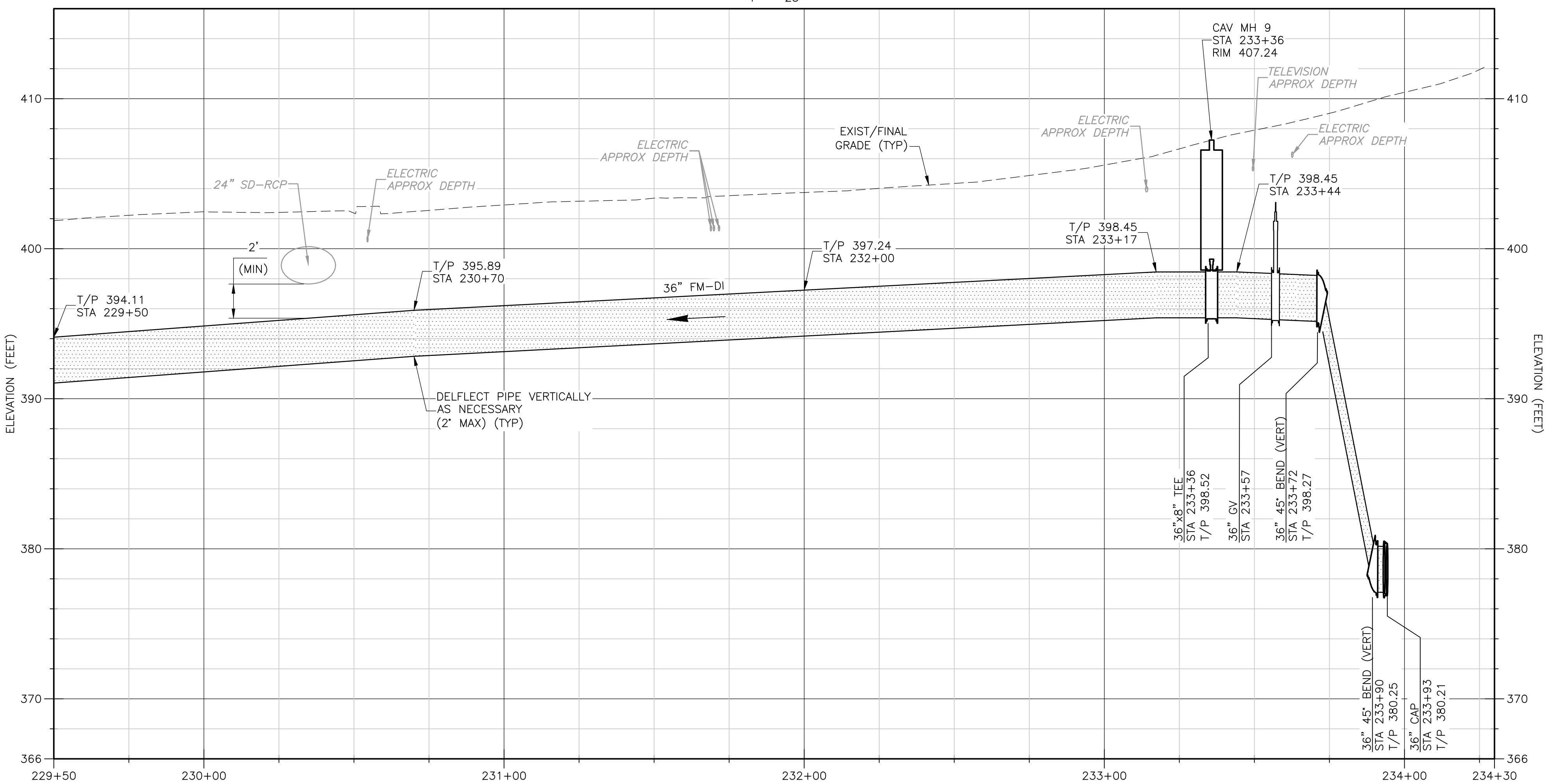
VESPER TRAIL
 PLAN AND PROFILE
 STA 223+00 TO STA 229+50

PROJECT NO. 5003-244105
FILE NAME: C036FMPP.DWG
SHEET NO. C-36



- NOTES:**
1. SEE SHEET ES-21 FOR EROSION AND SEDIMENT CONTROL PLAN.
 2. SEE SHEET TP-39 FOR TREE PRESERVATION AND PLANTING PLAN.
 3. SEE SHEET MT-3 PHASE 12 PHASING NOTES.
 4. STORMWATER CROSSING TO BE SUPPORTED FROM ABOVE OR REMOVED AND REINSTALL UP TO TWO LENGTHS OF RCP.

EASEMENT TABLE	
OWNER	TAX MAP NUMBER
ASBURY TYSONS CBG, LLC	TM 029-3-01-0003C



PROFILE
 HORIZONTAL: 1" = 25'
 VERTICAL: 1" = 5'

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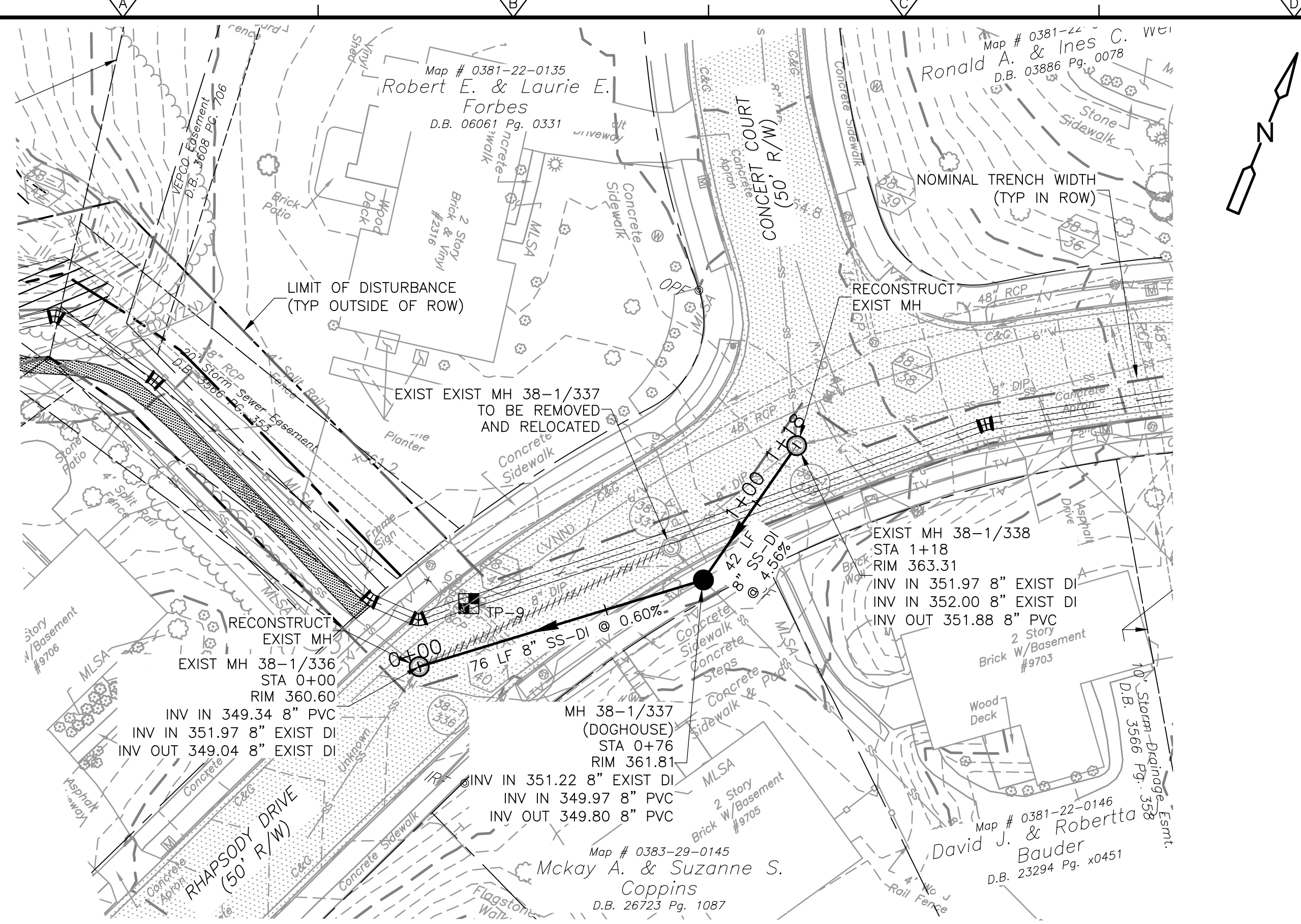
DESIGNED BY: G. THOMAS
 DRAWN BY: C. MILLER
 SHEET CHK'D BY: J. KUNAY
 CROSS CHK'D BY: _____
 APPROVED BY: _____
 DATE: AUGUST 2024



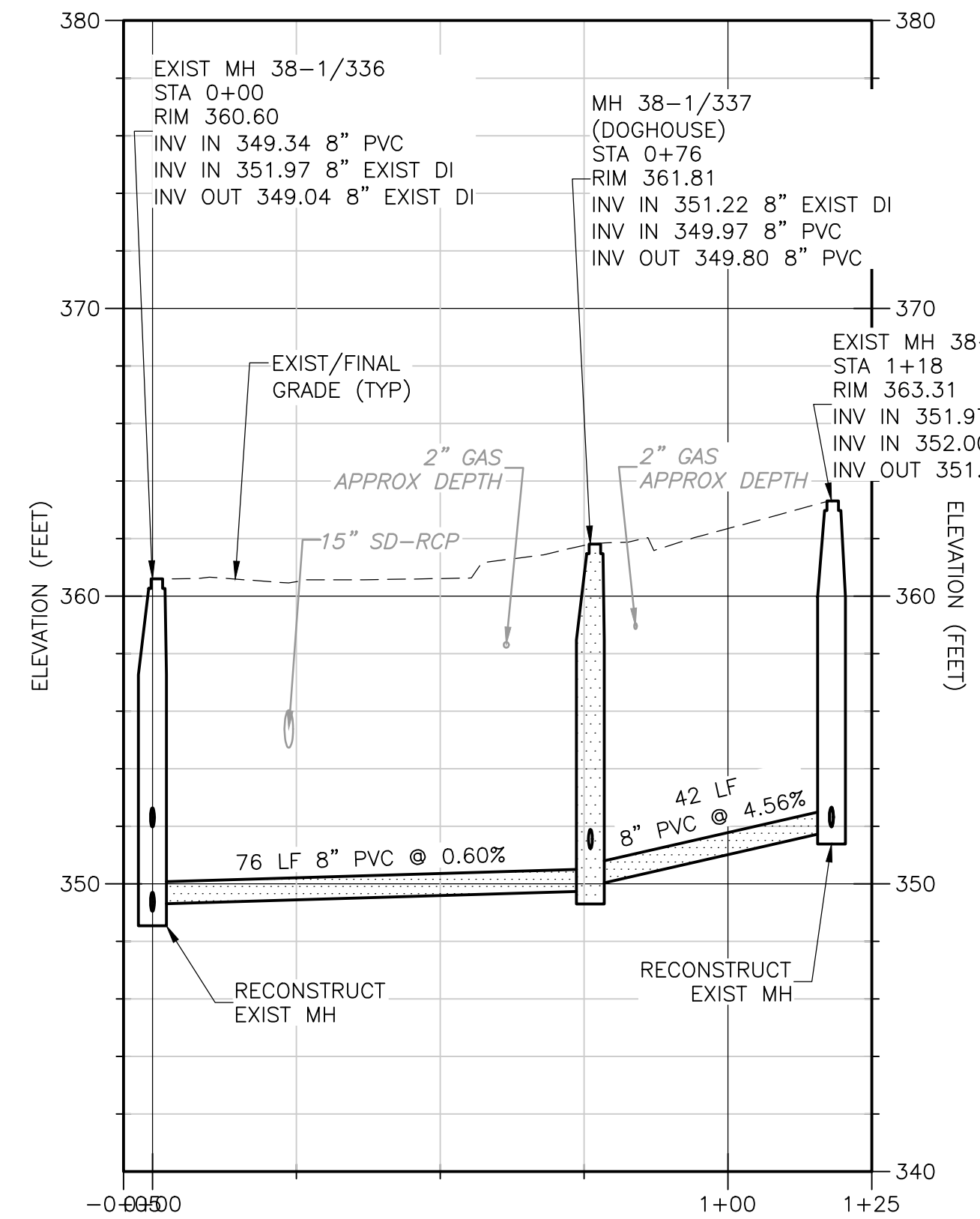
FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

VESPER TRAIL TO LEESBURG PIKE
 PLAN AND PROFILE
 STA 229+50 TO STA 233+93

PROJECT NO. 5003-244105
FILE NAME: C037FMPP.DWG
SHEET NO. C-37

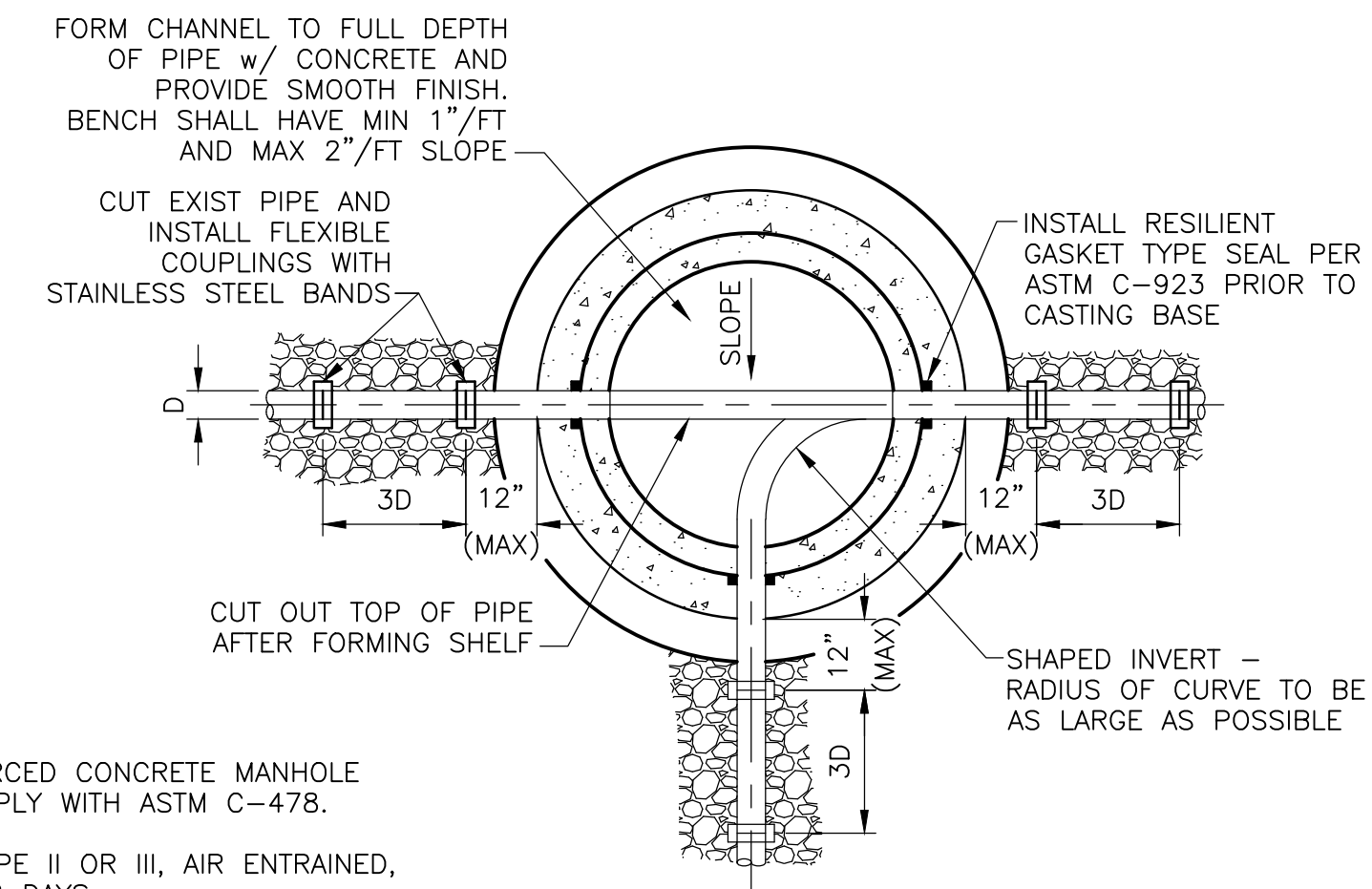
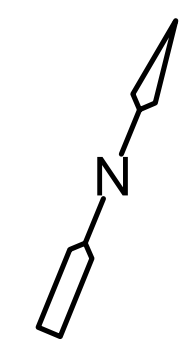


PLAN
1" = 25'

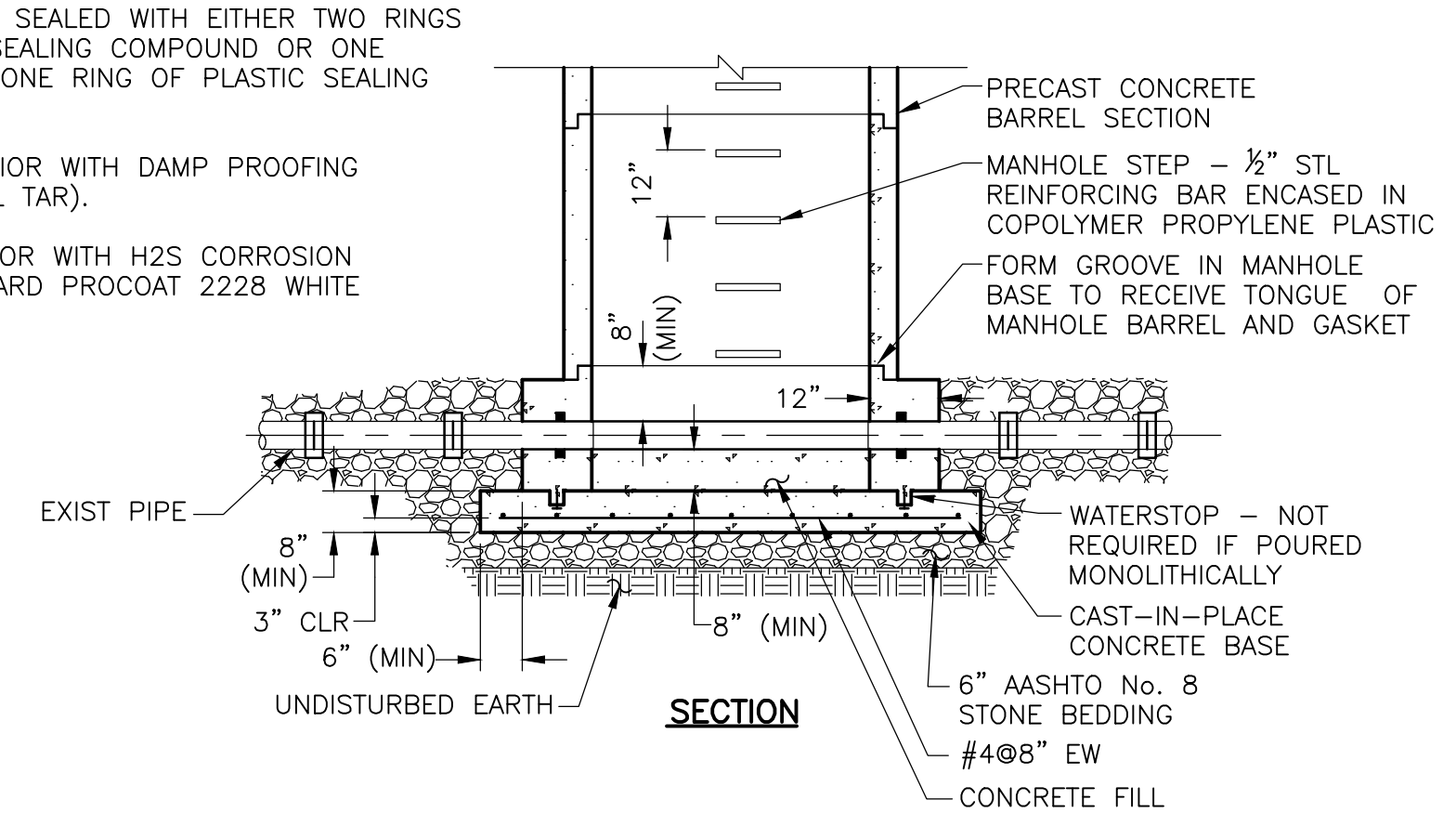


PROFILE
HORIZONTAL: 1" = 25'
VERTICAL: 1" = 5'

NOTE:
1. CONTRACTOR TO REPAIR ANY DISTURBED SIDEWALK.



PLAN



SECTION

**CAST-IN-PLACE BASE
NEW MANHOLE (DOGHOUSE) OVER EXISTING SEWER**



DETAIL A
NTS

- NOTES:**
1. ALL PRECAST REINFORCED CONCRETE MANHOLE SECTIONS SHALL COMPLY WITH ASTM C-478.
 2. CEMENT SHALL BE TYPE II OR III, AIR ENTRAINED, WITH 4,000 psi AT 28 DAYS.
 3. REINFORCEMENT SHALL BE GRADE 60 PER ASTM A-615.
 4. ALL JOINTS SHALL BE SEALED WITH EITHER TWO RINGS PREFORMED PLASTIC SEALING COMPOUND OR ONE O-RING GASKET AND ONE RING OF PLASTIC SEALING COMPOUND.
 5. COAT MANHOLE EXTERIOR WITH DAMP PROOFING (PROMASTIC 900 COAL TAR).
 6. COAT MANHOLE INTERIOR WITH H2S CORROSION PROTECTION (PRO GUARD PROCOAT 2228 WHITE EPOXY).

XREFS: [CDMS_2234_CEP011ST_CWP020ST_CEP012ST] Images: []
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REV. NO.	DATE	DRWN	CHKD	REMARKS

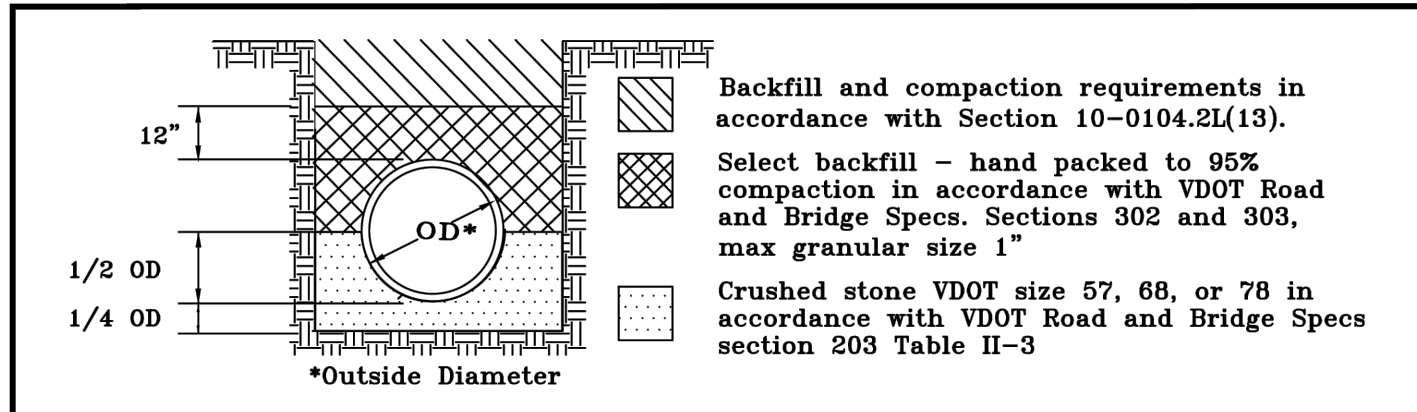
DESIGNED BY:	G. THOMAS
DRAWN BY:	C. MILLER
SHEET CHK'D BY:	J. KUNAY
CROSS CHK'D BY:	
APPROVED BY:	
DATE:	AUGUST 2024



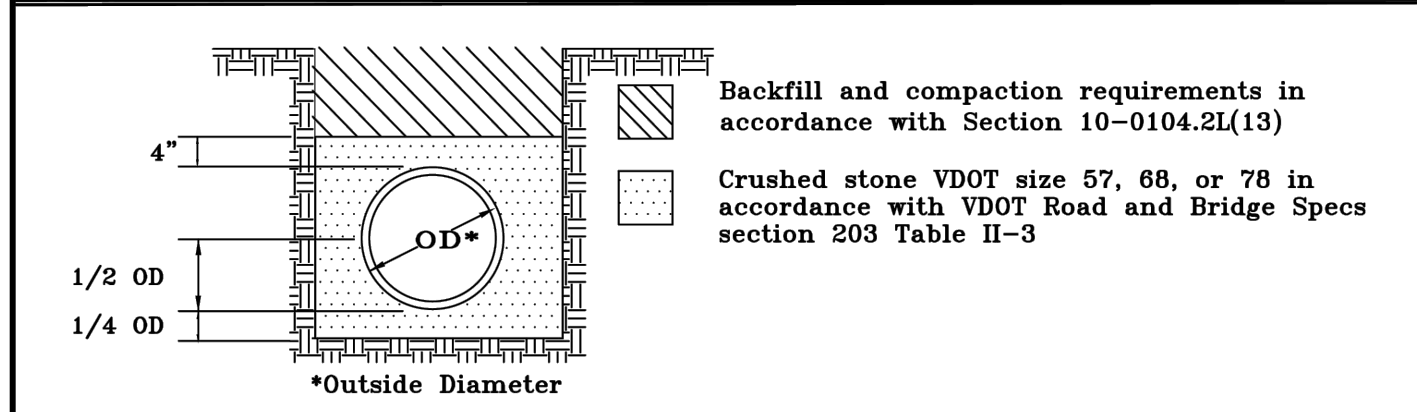
FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

RHAPSODY DRIVE
 GRAVITY SEWER RELOCATION
 PLAN AND PROFILE
 STA 0+00 TO STA 1+18

PROJECT NO.	5003-244105
FILE NAME:	C0385SPP.DWG
SHEET NO.	C-38



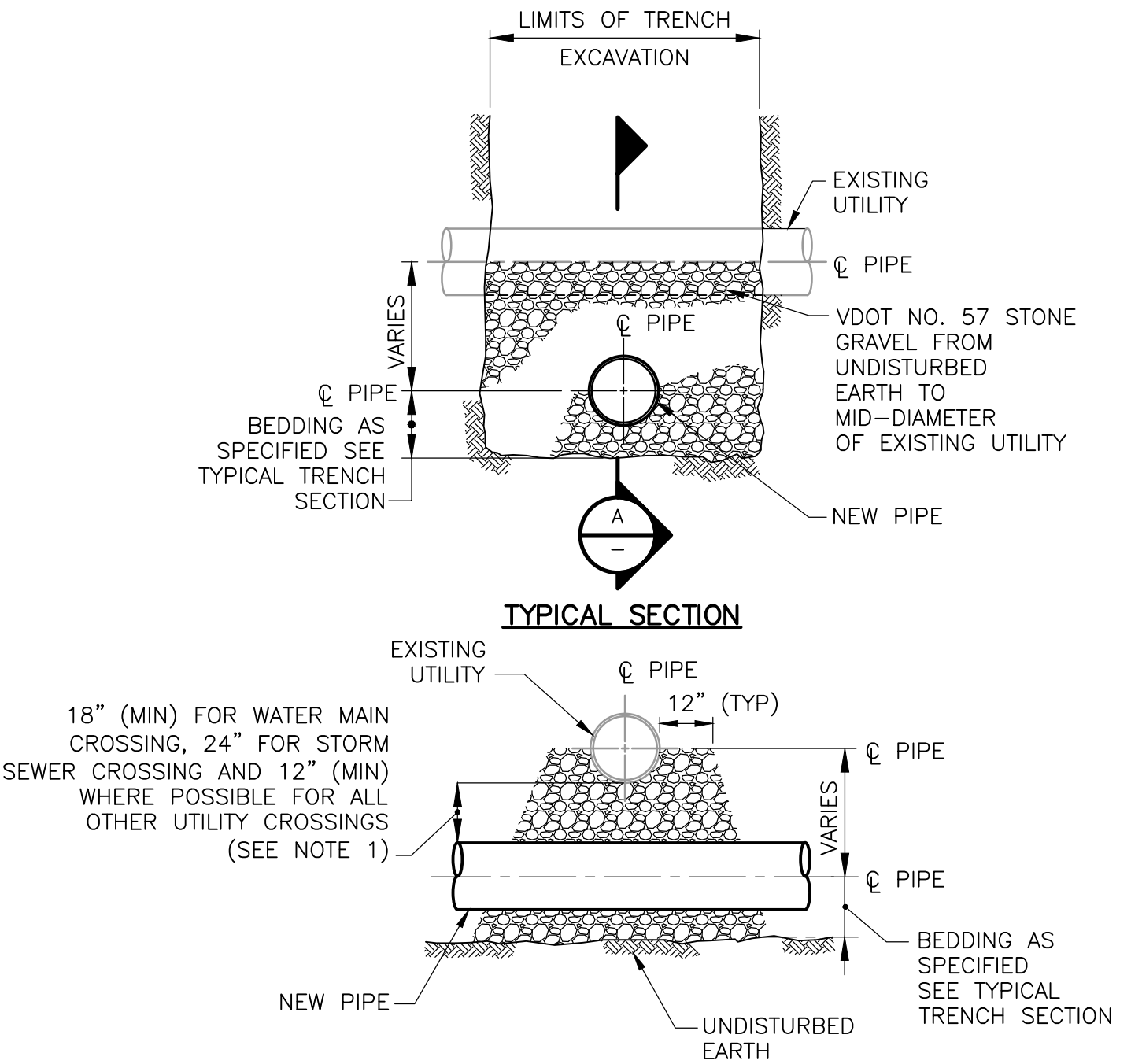
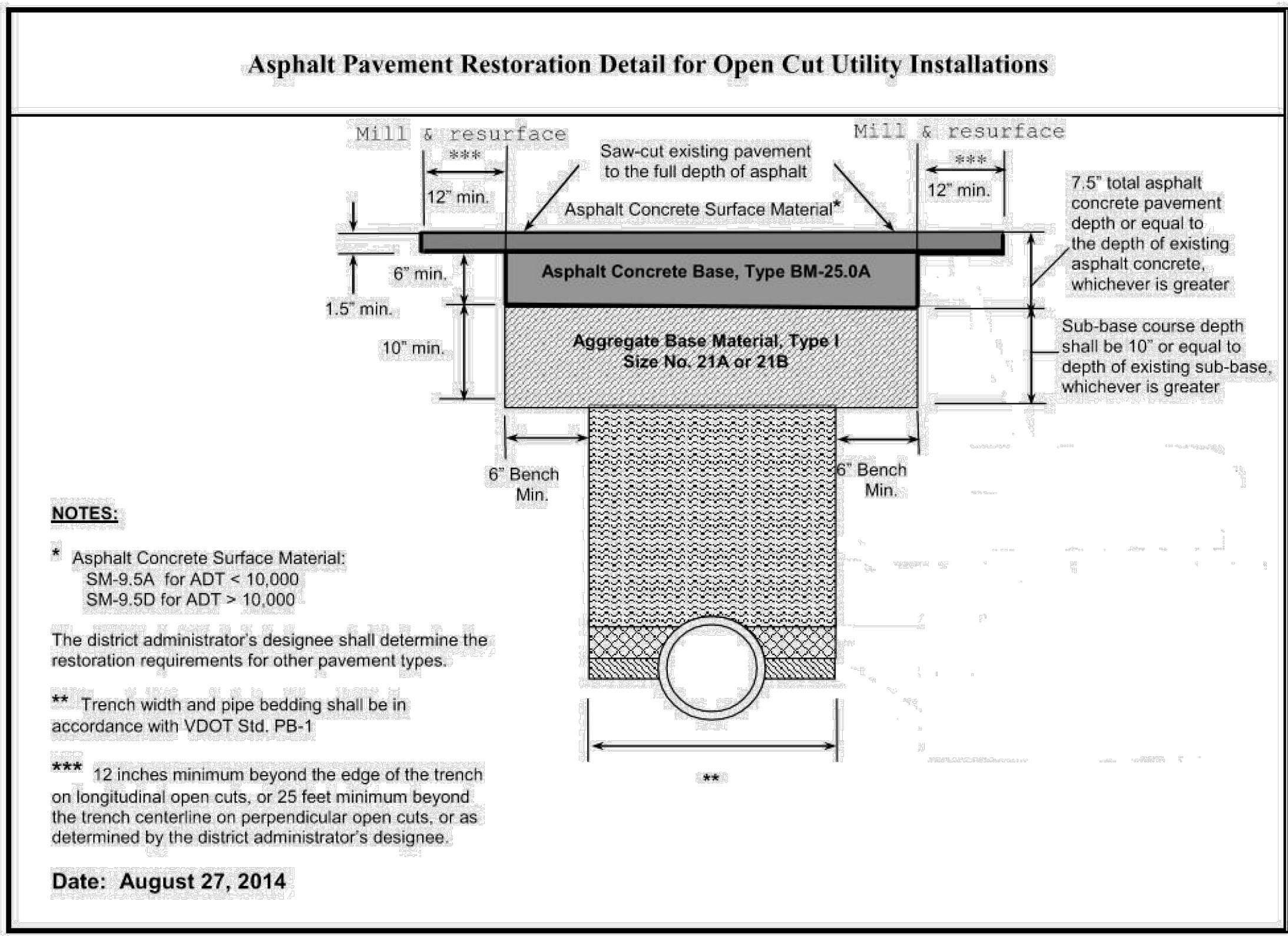
Ref. Sec. 6-1607.1B(2), 10-0103.7, Plate 17-10 Rev. 1-00, 2011 Reprint, 2018 Reprint, 10-20	TYPICAL TRENCH CONSTRUCTION PIPE BEDDING - ALTERNATE "A" (CONTRACTOR'S OPTION)	PLATE NO. 15-10
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Ref. Sec. 6-1607.1B(2), 10-0103.7, Plates 17-10, 18-10, 19-10 Rev. 1-00, 2011 Reprint, 2018 Reprint, 10-20	TYPICAL TRENCH CONSTRUCTION PIPE BEDDING - ALTERNATE "B" (CONTRACTOR'S OPTION)	PLATE NO. 16-10
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NOTE 1: The width of the trench is to be as specified by the Engineer on the plans or as set forth in the Specs. Max. trench width and depth must be as specified in Tables 10.4 and 10.5. Trenching methods must be in compliance with the Va. Department of Labor and Industry (VOSH) requirements.

NOTE 2: The pipe must be bedded in carefully compacted granular material placed on a flat trench bottom. The granular material must be crushed stone VDOT size 57, 68, or 78, in accordance with VDOT Spec. Section 203. The granular bedding must have a min. thickness of 1/4 the outside pipe dia. (4" min.) and must extend vertically in accordance with alternatives A or B. If the max. width of the trench at the top of the pipe exceeds those specified, granular bedding material will be brought to the top of the pipe for the full width of the trench. The remainder of the side fills and a min. depth of 12" over the top of the pipe must be filled with carefully compacted material. Should the contractor elect to use larger stone to carry the water, the larger stone is to be placed beneath the specified amount of granular material. The larger stone is not in any way to affect the amount of granular material to be used.



NOTE:
1. CONTRACTOR SHALL INSTALL FLOWABLE FILL WHERE LESS THAN 18-INCHES SEPARATION, FLOWABLE MUST EXTEND AT LEAST 24-INCHES BEYOND EDGE OF PIPE CROSSING.

DETAIL A
NTS

DETAIL B
NTS

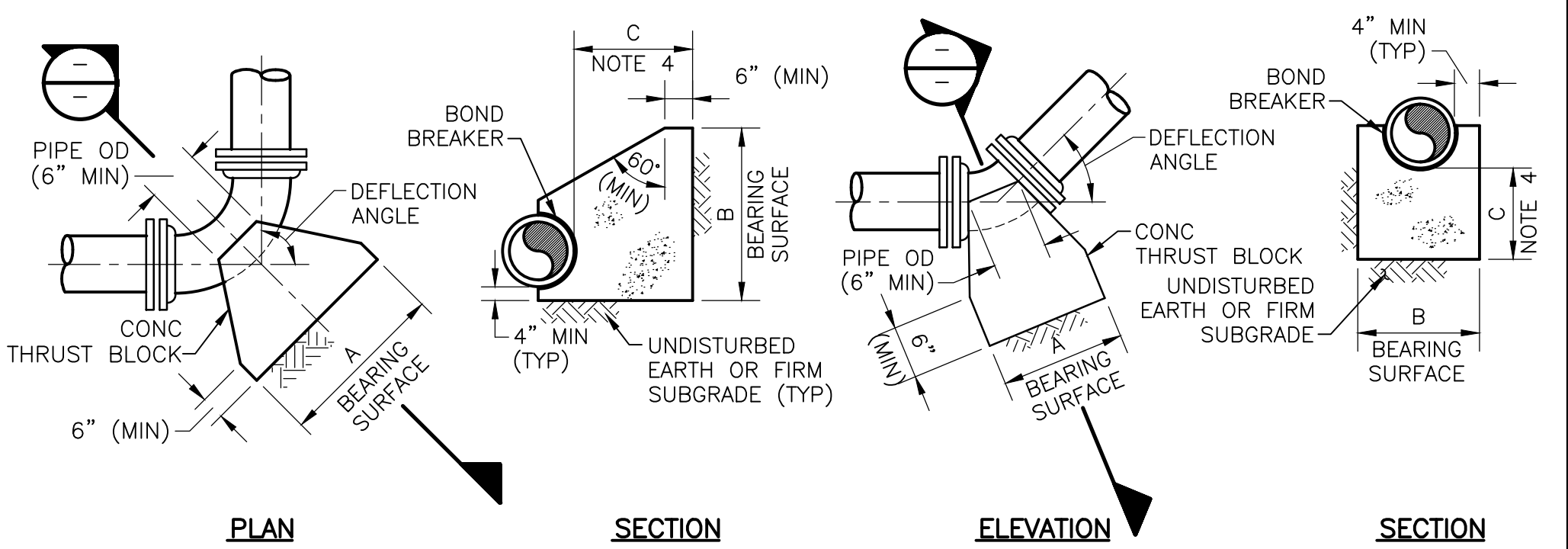
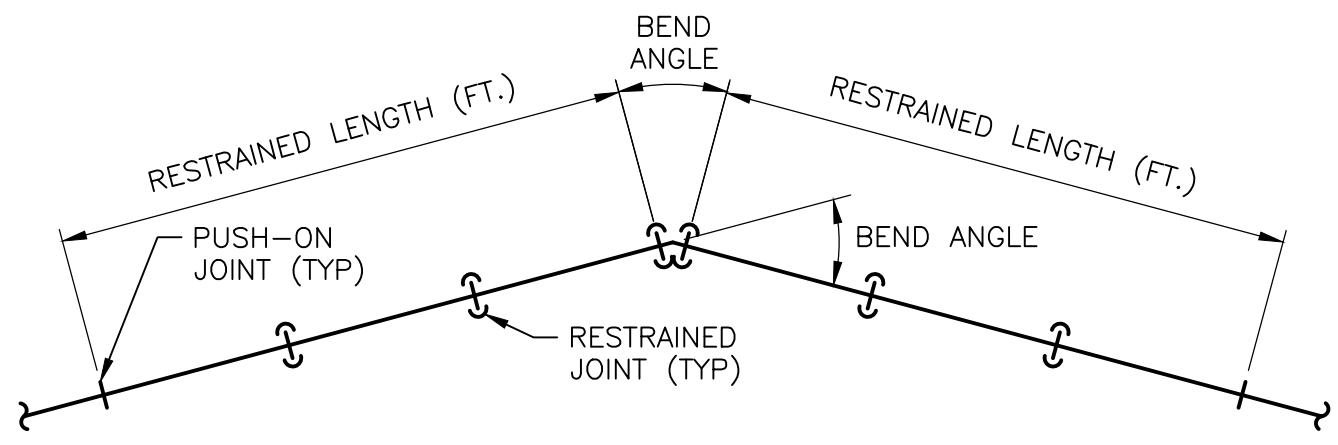
DETAIL C
NTS

- NOTES:**
- PIPE BEDDING & TRENCH BACKFILL - COMMON FILL OR SELECTED COMMON FILL MATERIAL COMPACTED IN LAYERS TO 95% MAXIMUM DENSITY AS PER AASHTO T180 AND 98% UNDER PAVED AREAS. SEE SECTION 31 20 00.
 - WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION. DEWATER AS NECESSARY.
 - ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF FLOW.
 - 10" MAX FOR PIPE DIAMETER LESS THAN 24"; 12" MAX FOR PIPE DIAMETER LESS THAN 42"; AND 24" MAX FOR PIPE DIAMETER 42" AND OVER
 - CONCRETE STRENGTH, (28 DAYS): CLASS "A" = 4,000 PSI, CLASS "B" = 3,000 PSI, CLASS "C" = 2500 PSI.
 - 4" MIN FOR PIPE 24" DIA & LESS; 6" MIN FOR PIPE 30" & LARGER OF COMPACTED SELECTED COMMON FILL.
 - DEPTH FOR REMOVAL OF UNSUITABLE MATERIAL SHALL BE AS REQ'D TO REACH SUITABLE FOUNDATION; FOR NON-CUSHIONING TRENCH DEPTH SHALL BE 6" BELOW BOTTOM OF UTILITY
 - SHEETING SHALL BE DRIVEN BELOW THE UTILITY INVERT IF REQUIRED FOR LATERAL SUPPORT OR UNSUITABLE MATERIAL REMOVAL. WHERE DRIVEN BELOW PIPE INVERT, SHEETING SHALL BE CUT OFF A MIN OF 12" ABOVE TOP OF PIPE, OR HIGHER, AS AUTHORIZED BY THE ENGINEER, AND LEFT IN PLACE. IN NO CASE SHALL SHEETING LEFT IN PLACE EXTEND HIGHER THAN 30" BELOW SURFACE GRADE UNLESS SPECIFICALLY APPROVED. BRACING SHALL BE PROVIDED AS REQUIRED.
 - BACKFILL MATERIALS SHALL BE EITHER OF THE SAME TYPE AND COMPOSITION AS THE MATERIALS REMOVED, OR OF EQUAL OR GREATER STRUCTURAL ADEQUACY. EXCAVATED MATERIALS MIXED WITH DELETERIOUS SUBSTANCES DURING CONSTRUCTION SHALL NOT BE USED FOR BACKFILLING.

MINIMUM RESTRAINED PIPE LENGTH (FT) FOR VERTICAL BENDS (WITH POLYETHYLENE ENCASEMENT)				MINIMUM RESTRAINED PIPE LENGTH (FT) FOR HORIZONTAL BENDS (WITH POLYETHYLENE ENCASEMENT)				
DIAMETER (IN)	VERTICAL DOWN BEND ANGLE (DEGREES)			DIAMETER (IN)	HORIZONTAL OR VERTICAL UP BEND ANGLE (DEGREES)			
	45	22½	11½		90/TEE/DEAD END	45	22½	11½
36	210	101	50	36	133	55	26	13

NOTE: ALL 36" PIPE AND FITTINGS SHALL BE RESTRAINED

NOTES:		
1	DESIGN PRESSURE	= 250 PSI
2	DEPTH OF COVER	= 4 FEET
3	SAFETY FACTOR	= 1.5
4	SOIL TYPE	= SAND/SILT
5	SOIL INTERNAL FRICTION ANGLE	= 30 DEGREES
6	SOIL COHESION	= 0 PSF
7	SOIL DENSITY	= 90 PCF



DETAIL FOR HORIZONTAL BENDS **DETAIL FOR LOWER VERTICAL BENDS**

NOMINAL PIPE SIZE (INCHES)	MAXIMUM PIPE OD (INCHES)	REQUIRED BEARING AREA (SQ FT)					
		90 DEG	60 DEG	45 DEG	30 DEG	22.50 DEG	11.25 DEG
36	-	-	-	-	-	-	-

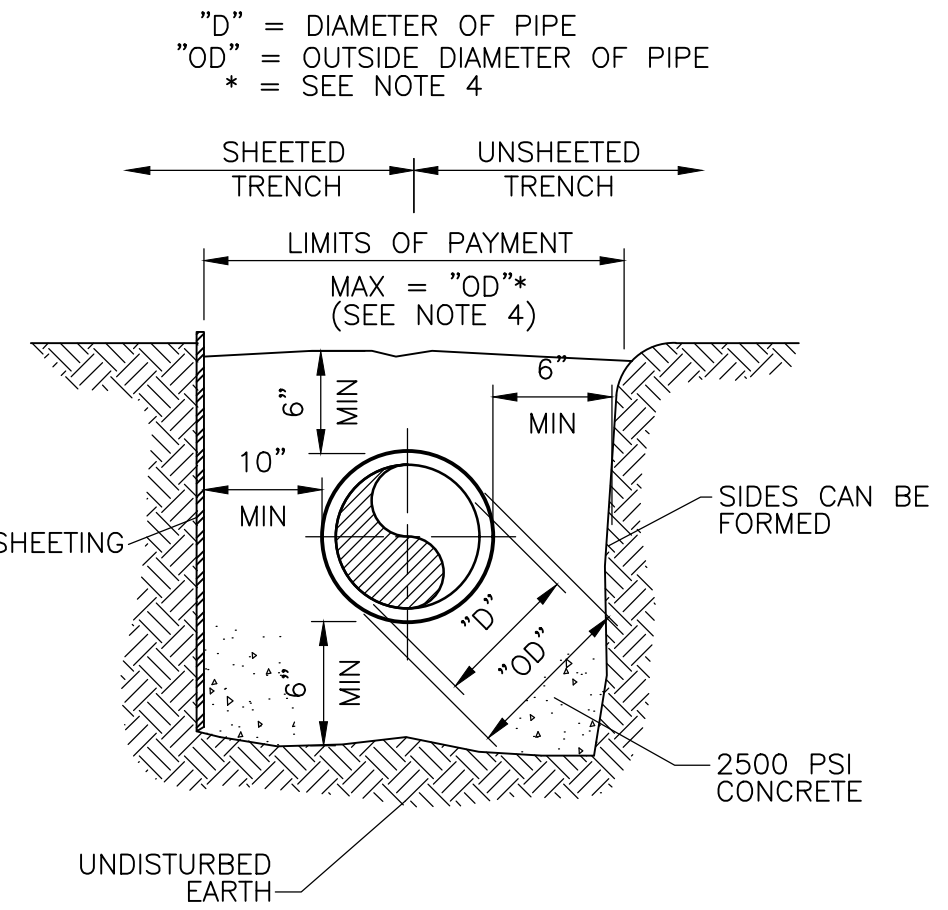
THRUST BLOCKS FOR HORIZONTAL BENDS AND LOWER VERTICAL BENDS

NOTES:

- MAXIMUM TEST PRESSURE = 1.5 x 250 PSI
- MINIMUM ALLOWABLE SOIL BEARING PRESSURE = 2000 PSF
- BEARING AREA = A x B
- C SHALL BE GREATER THAN A/2 AND B/2.

THRUST BLOCKS FOR HORIZONTAL BENDS AND LOWER VERTICAL BENDS

DETAIL F
NTS



FULL CONCRETE ENCASEMENT
DETAIL D
NTS

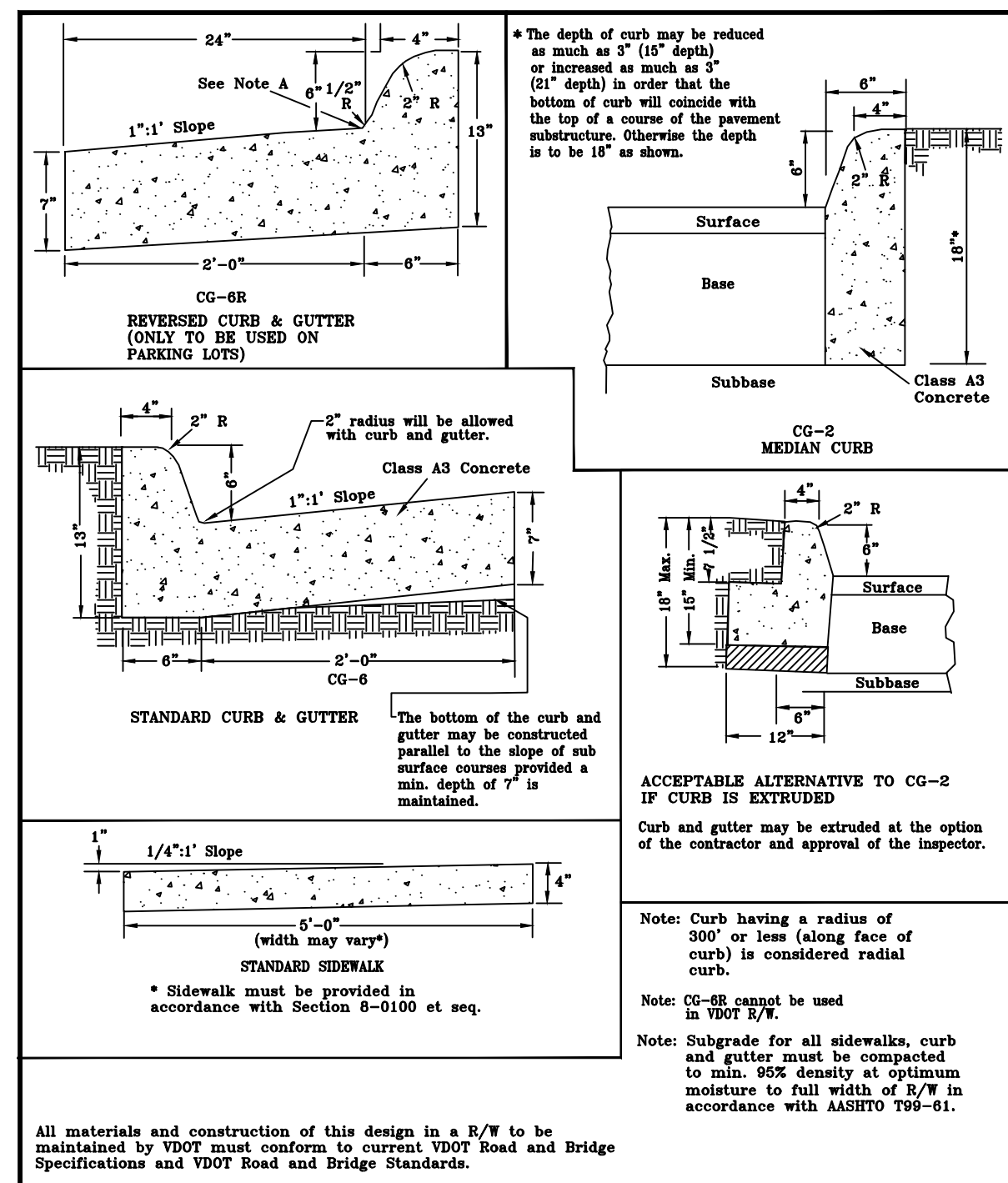
RESTRAINED PIPE LENGTH
DETAIL E
NTS

GENERAL DETAILS I
CD-1

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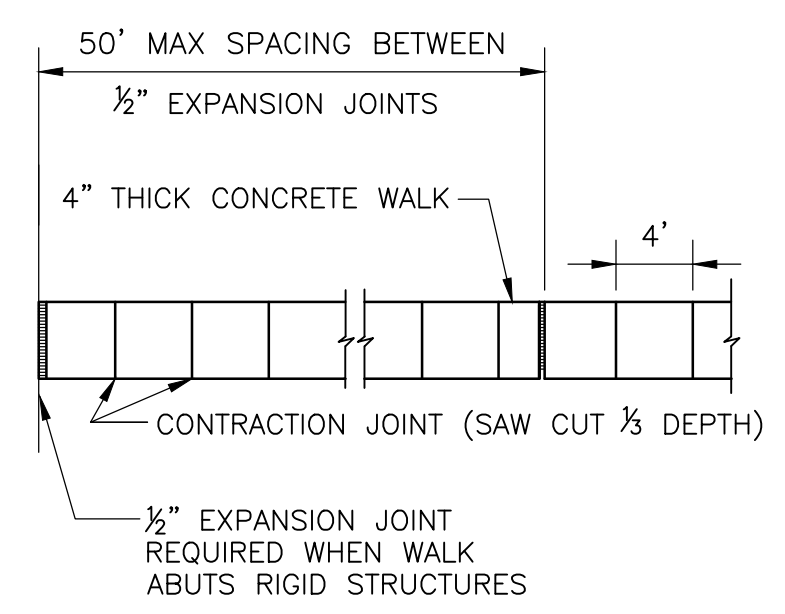
DESIGNED BY: M. CHENG	 10306 Eaton Place, Suite 220 Fairfax, VA 22030 Tel: (703) 691-6500
DRAWN BY: C. MILLER	
SHEET CHK'D BY: J. KUNAY	
CROSS CHK'D BY:	
APPROVED BY:	
DATE: AUGUST 2024	

FAIRFAX COUNTY, VIRGINIA DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES TYSONS WASTEWATER CONVEYANCE SYSTEM MODIFICATIONS PACKAGE 4: FORCE MAIN		PROJECT NO. 5003-244105 FILE NAME: CD01SDDT.DWG SHEET NO. CD-1
70% SUBMITTAL - NOT FOR CONSTRUCTION		



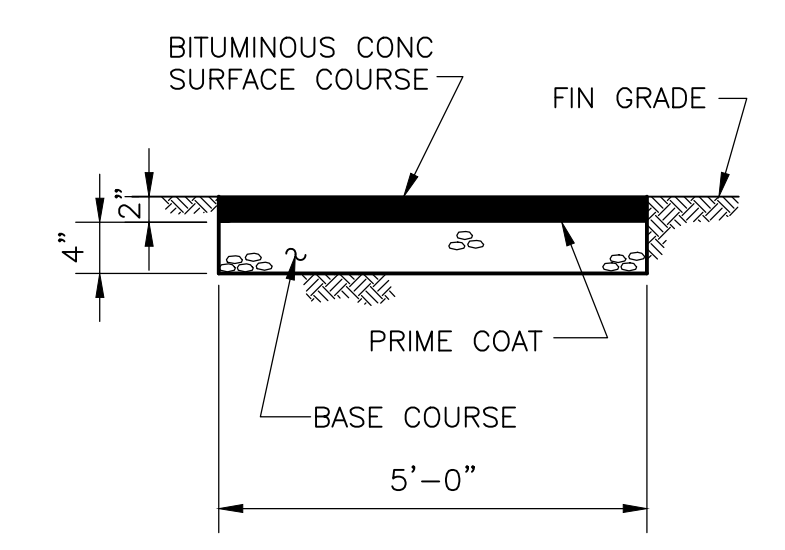
Ref. Sec. 7-0101.2, 7-0103, 7-0105.1, 7-0306.6B	STANDARD COMBINATION CURB & GUTTER & SIDEWALK	PLATE NO.	STD. NO.
Rev. 1-00, 11-05, 2011 Reprint, 2018 Reprint		8-7	CGM-1

DETAIL A
NTS



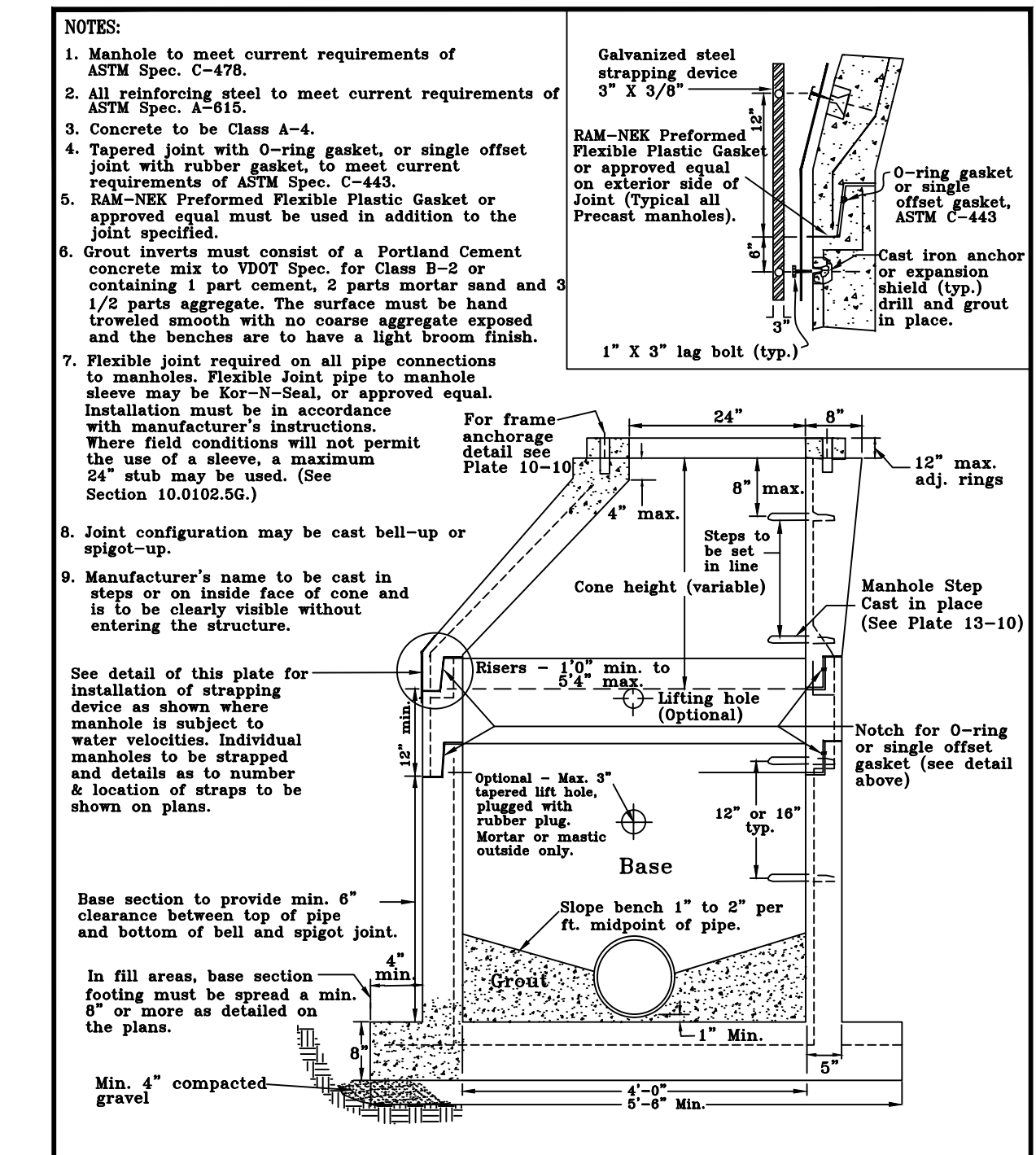
Ref. Sec. 10-0102.5D(7), Plate 4-10	CONCRETE WALK	PLATE NO.	STD. NO.
Rev. 1-00, 2011 Reprint, 4-13, 2018 Reprint, 10-20		3-10	DPW-15

DETAIL B
NTS



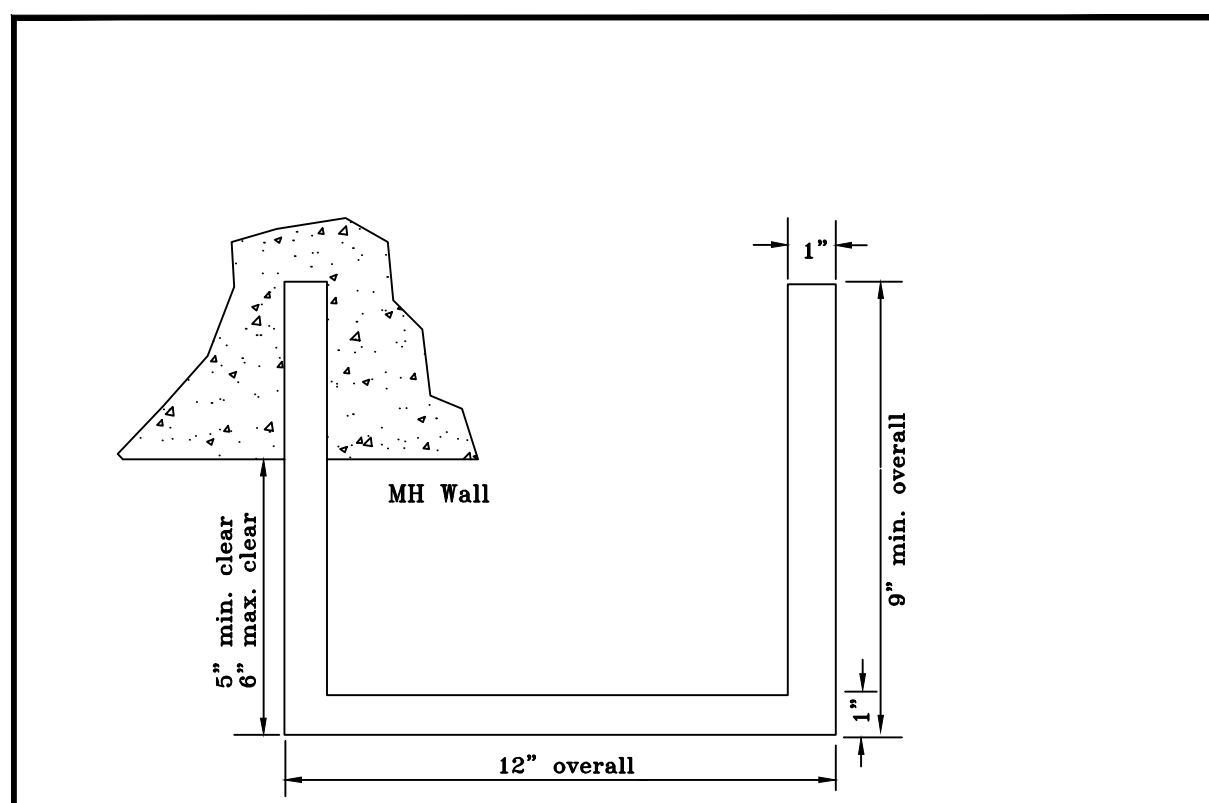
Ref. Sec. 10-0102.5D(7), Plate 4-10	BITUMINOUS CONCRETE WALKWAY	PLATE NO.	STD. NO.
Rev. 1-00, 2011 Reprint, 4-13, 2018 Reprint, 10-20		3-10	DPW-15

DETAIL C
NTS



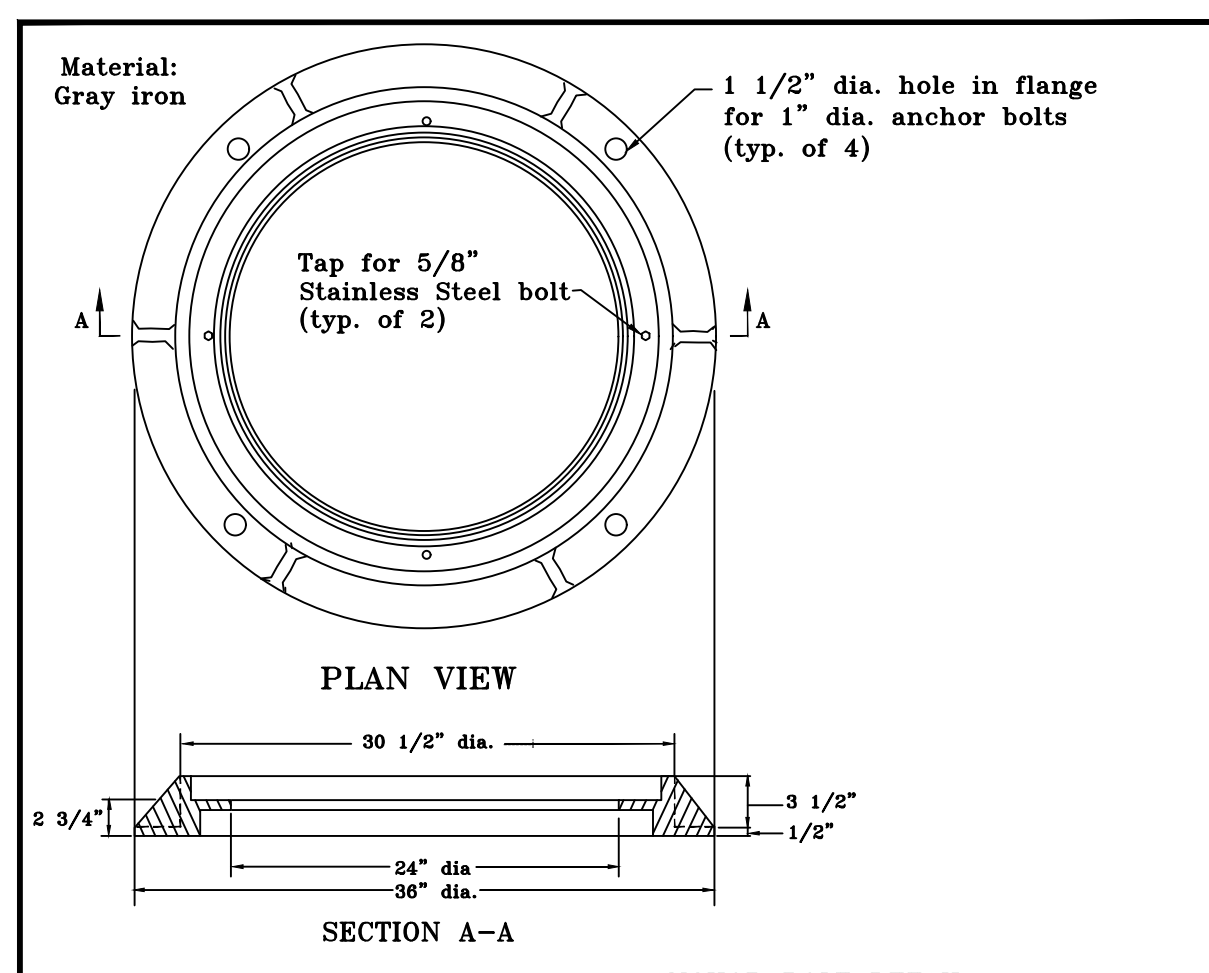
Ref. Sec. 10-0102.5D(7), Plate 4-10	TYPICAL 4'-0" ID PRECAST CONCRETE MANHOLE	PLATE NO.	STD. NO.
Rev. 1-00, 2011 Reprint, 4-13, 2018 Reprint, 10-20		3-10	DPW-15

DETAIL D
NTS



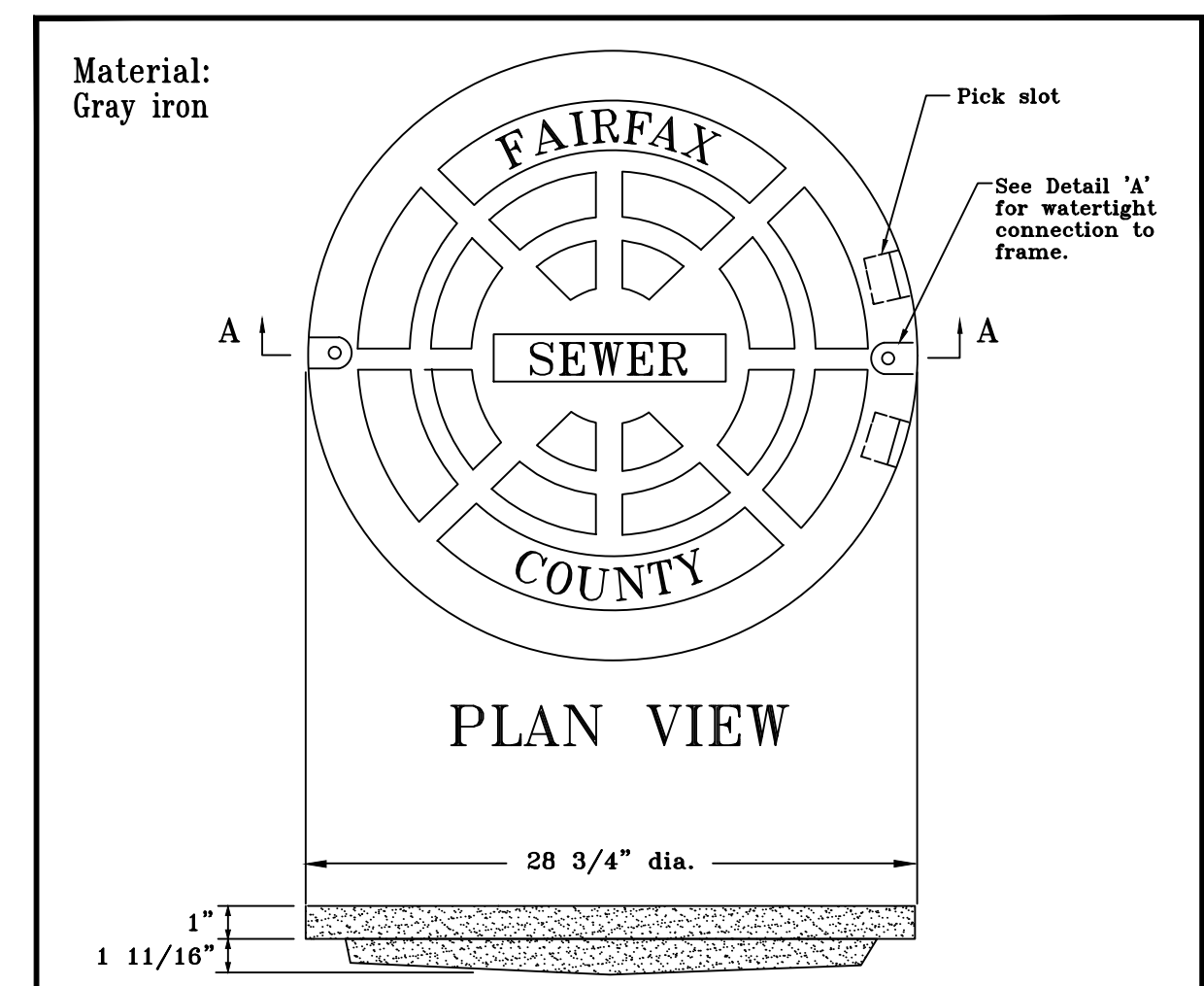
Ref. Sec. 10-0102.5D(7), Plate 3-10, 4-10	MANHOLE STEP DETAIL	PLATE NO.	STD. NO.
Rev. 1-00, 2011 Reprint, 2018 Reprint		13-10	DPW-24

DETAIL E
NTS



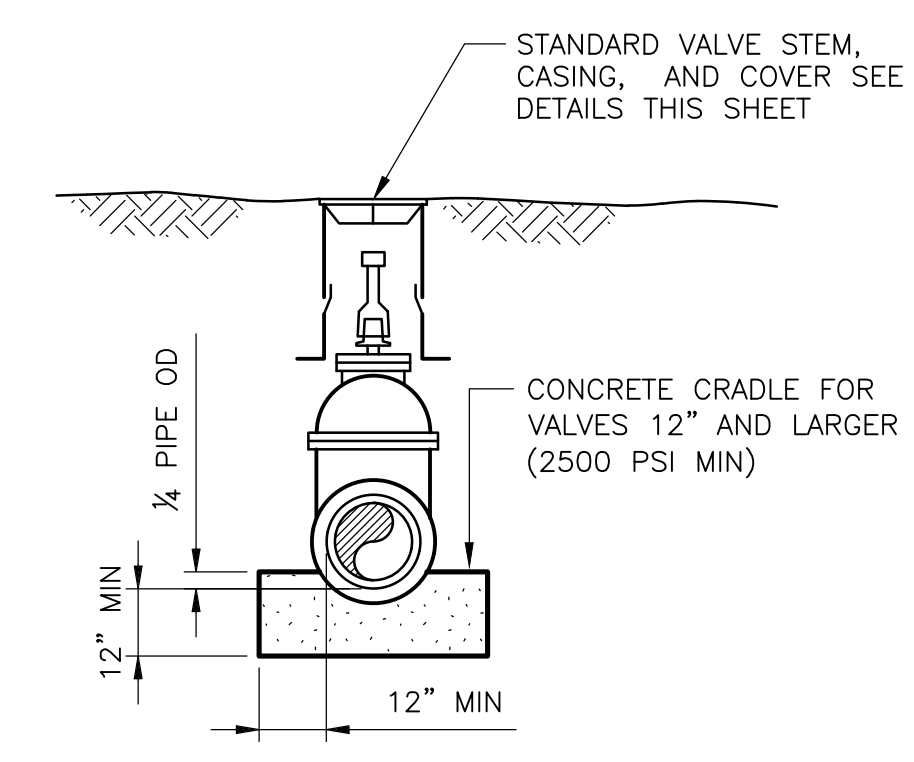
Ref. Sec. 10-0102.5D(7), Plates 3-10, 4-10, 6-10, 7-10	WATERTIGHT/LOCKING MANHOLE FRAME	PLATE NO.	STD. NO.
Rev. 1-00, 2011 Reprint		10-10	DPW-22

DETAIL F
NTS



Ref. Sec. 10-0102.5D(7), Plate 4-10	WATERTIGHT MANHOLE COVER	PLATE NO.	STD. NO.
Rev. 1-00, 2011 Reprint		11-10	DPW-23

DETAIL G
NTS



DETAIL H
NTS

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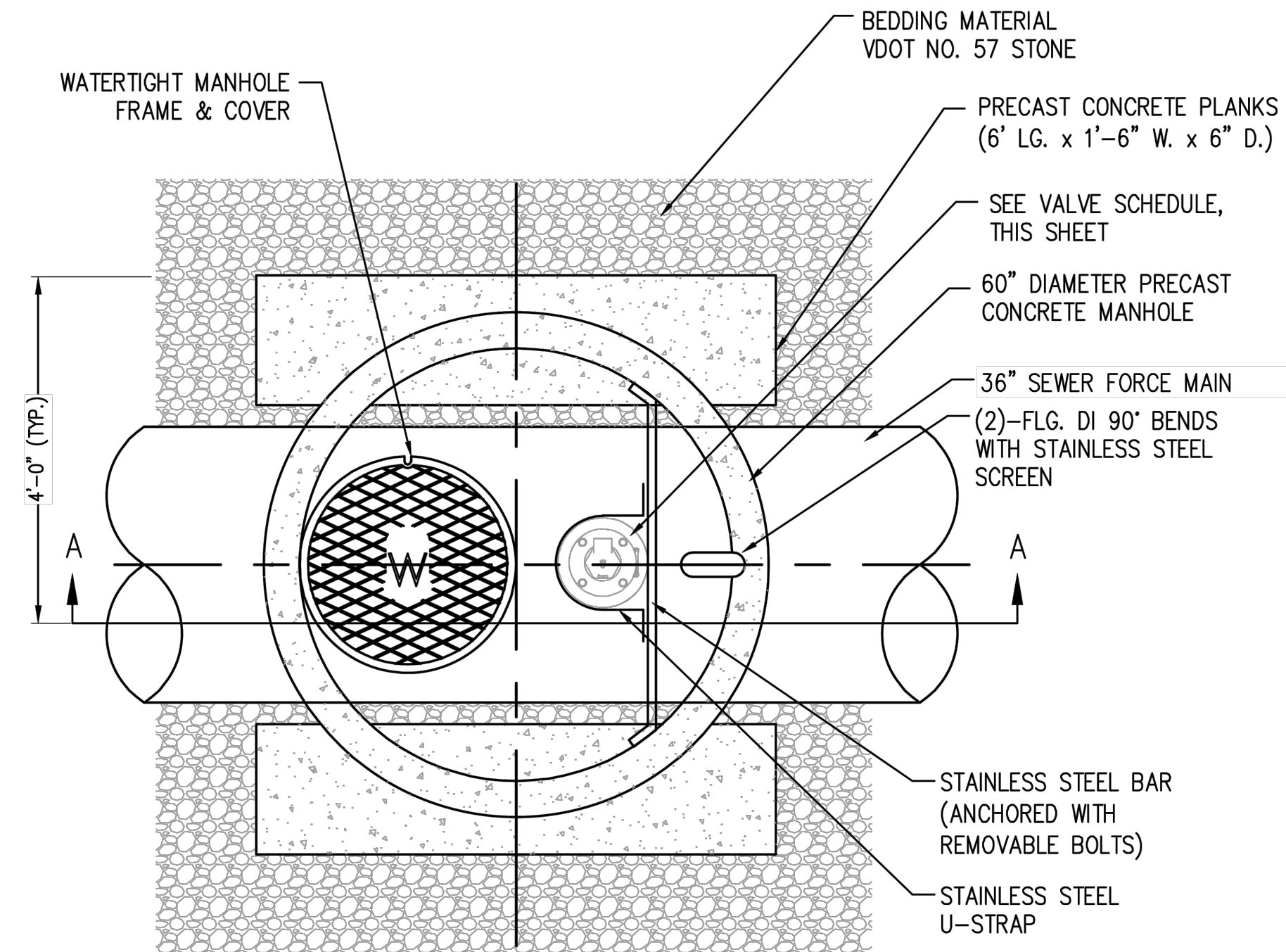
DESIGNED BY:	G. THOMAS
DRAWN BY:	C. MILLER
SHEET CHK'D BY:	J. KUNAY
CROSS CHK'D BY:	
APPROVED BY:	
DATE:	AUGUST 2024



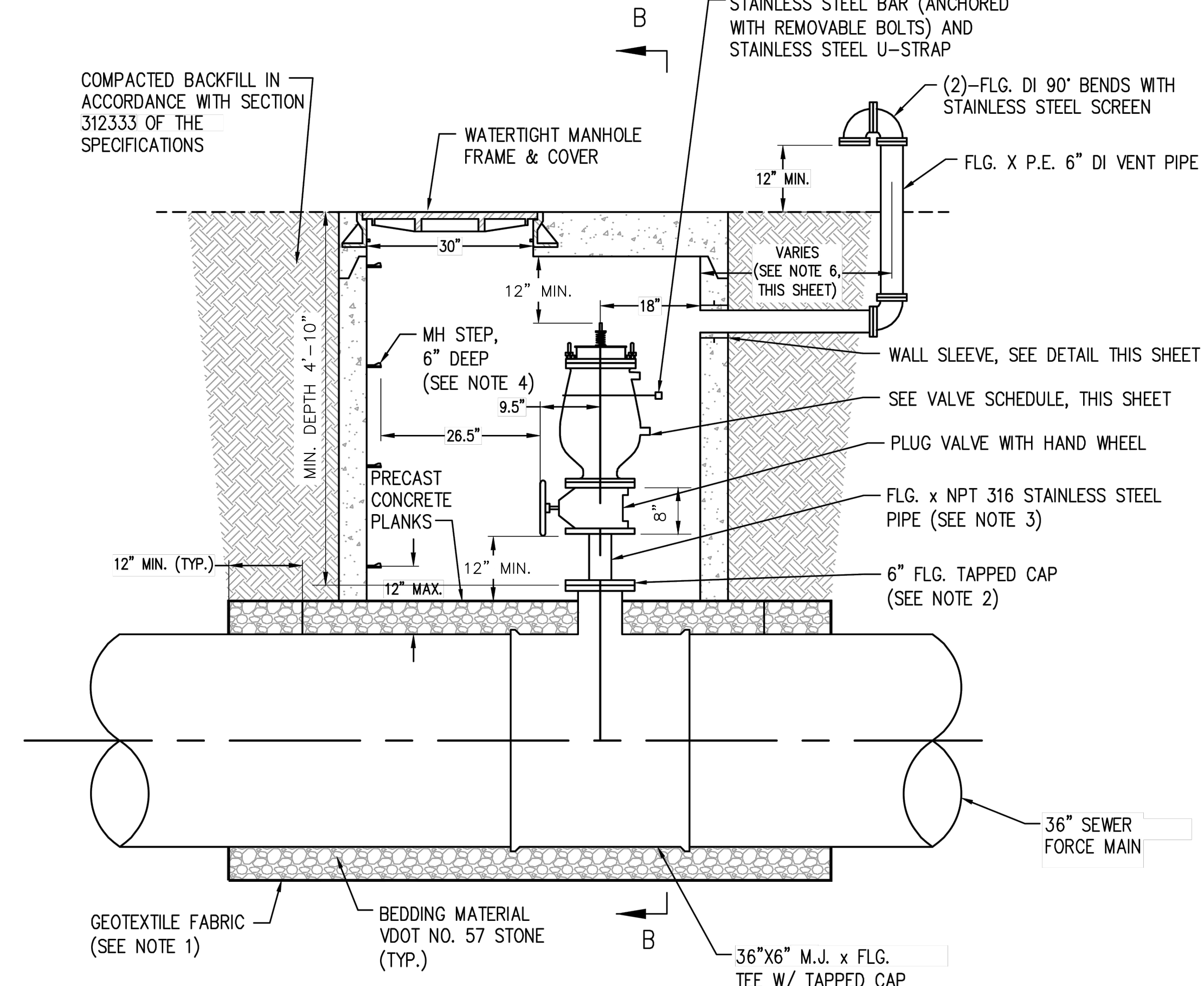
FAIRFAX COUNTY, VIRGINIA
DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
TYSONS WASTEWATER CONVEYANCE SYSTEM
MODIFICATIONS
PACKAGE 4: FORCE MAIN

GENERAL DETAILS II

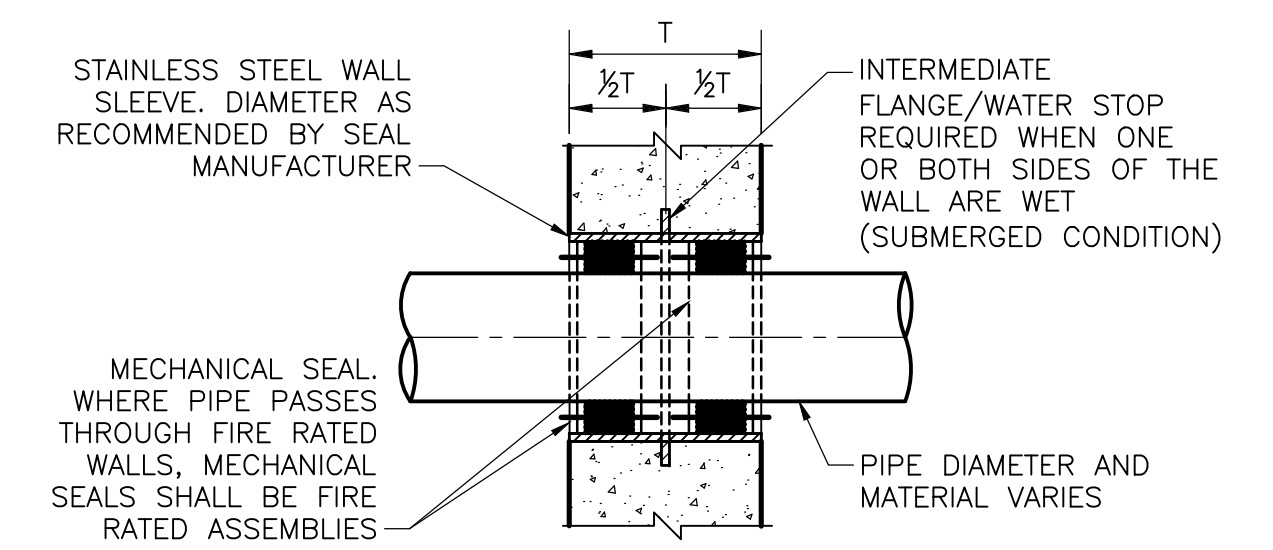
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FILE NAME:	CD02SDDT.DWG
SHEET NO.	CD-2



PLAN

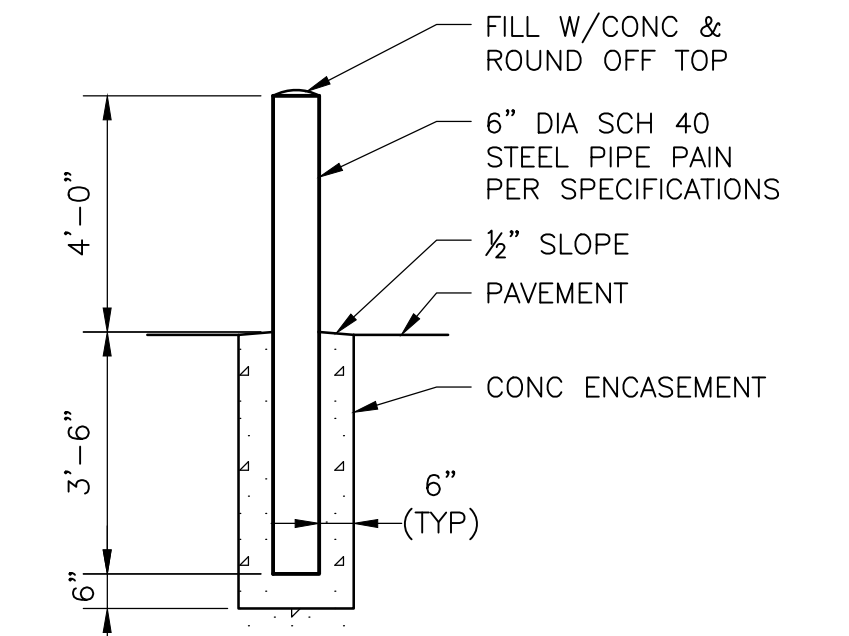


SECTION A-A



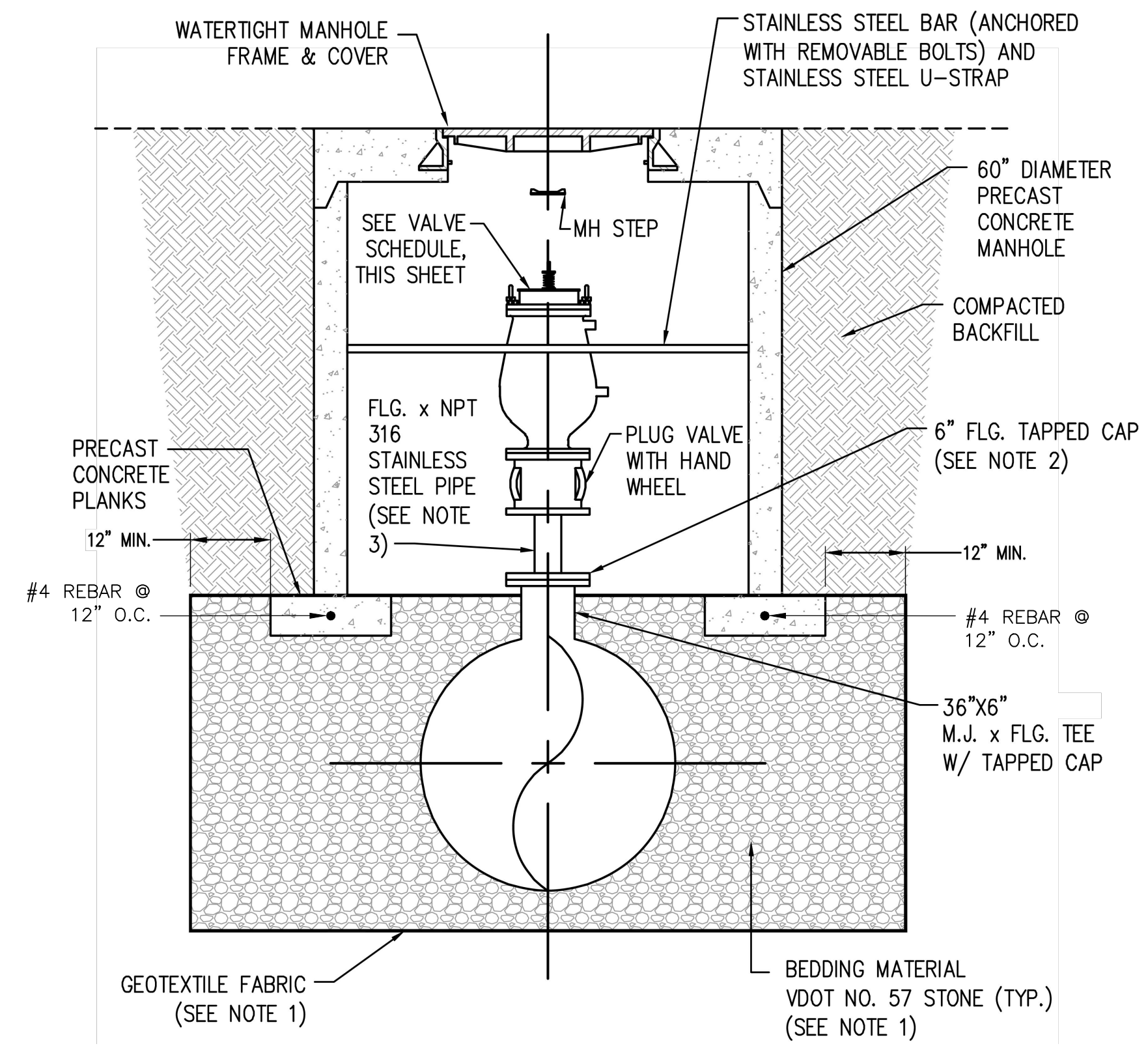
WALL SLEEVE WITH MECHANICAL SEAL FOR CONCRETE WALLS

DETAIL A



BOLLARD POST

DETAIL B



SECTION B-B

NOTES:

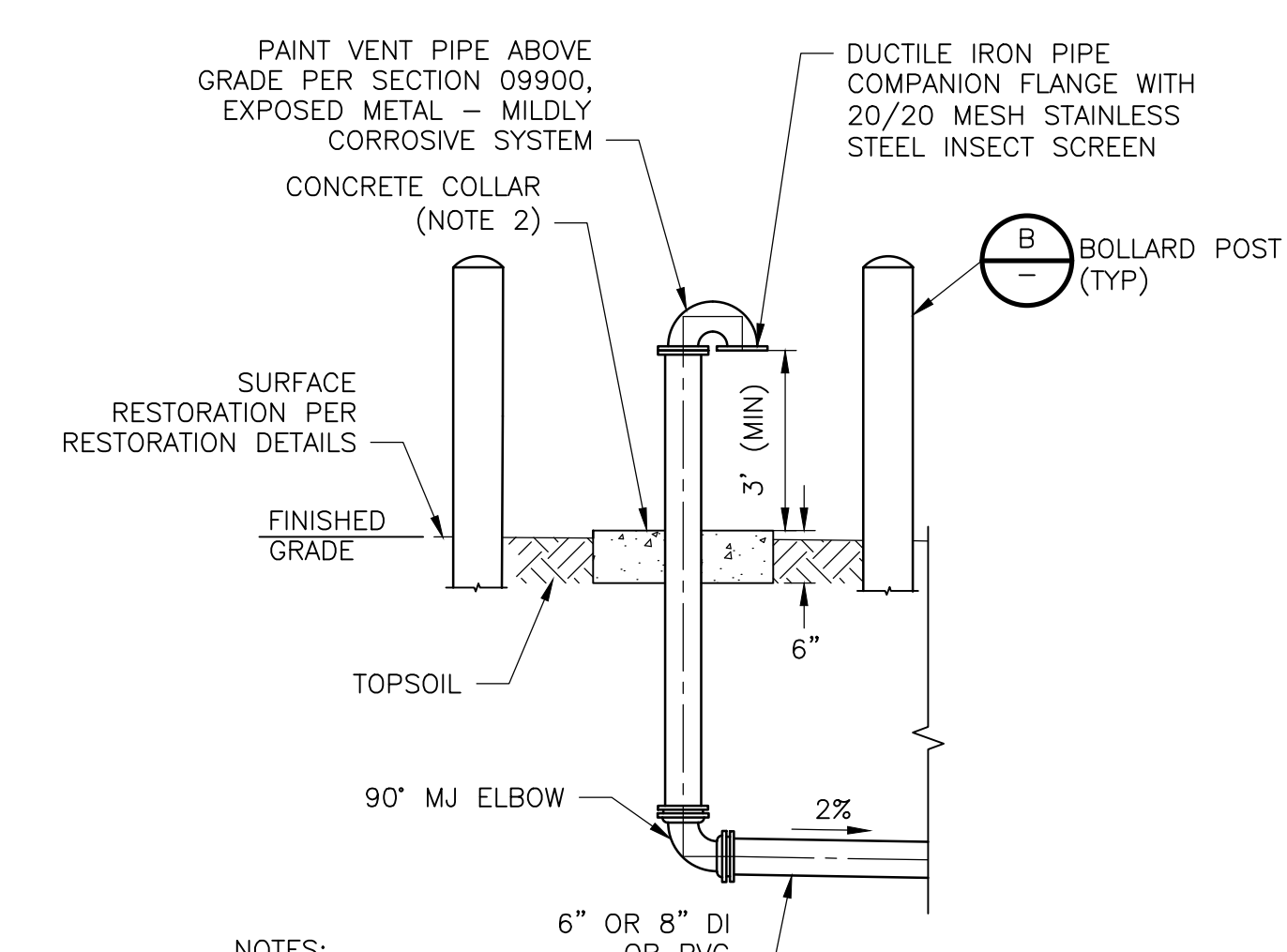
- BEDDING SHALL BE COMPLETELY WRAPPED IN GEO-TEXTILE FABRIC.
- SIZE OF 6" TAPPED CAP (SEE VALVE SCHEDULE FOR PIPE SIZE AND TAP SIZE) SHALL BE COORDINATED WITH THE SIZE OF THE COMBINATION AIR/VACUUM AND GATE VALVE.
- TOP OF VALVE SHALL BE A MINIMUM OF 8" FROM THE BOTTOM OF THE FLAT TOP OF THE MANHOLE. BRASS RISER SHALL BE PROVIDED BETWEEN GATE VALVE AND TEE TO ADJUST HEIGHT AS NECESSARY.
- MANHOLE STEPS SHALL BE SPACED MAXIMUM 18" OC.
- THE SIZE OF THE WELDED FLANGE OUTLET AND GATE VALVE SHALL BE THE SAME AS THE COMBINATION AIR VALVE SIZE.
- LENGTH TO BE DETERMINE IN THE FIELD BASED ON ACTUAL INSTALLED LOCATION. VENT SHALL BE LOCATED OUTSIDE PAVEMENT, BEHIND THE BACKSIDE OF CURB, OR IN THE VERGE BETWEEN THE BACKSIDE OF CURB AND THE SIDEWALK.
- PROVIDE 316 STAINLESS STEEL MATERIALS AND BOLTS FOR ALL MATERIALS.
- SEE DETAIL THIS SHEET FOR MECHANICAL WALL SLEEVE.
- PLUG VALVE TYPE IN ACCORDANCE WITH SECTION 400578.29 OF THE SPECIFICATIONS.

AIR VALVE SCHEDULE

NO.	STATION	VALVE TYPE	VALVE/PIPING (IN)
1	33+91	COMBINATION AIR	3
2	56+97	COMBINATION AIR	3
3	74+83	COMBINATION AIR	3
4	94+39	COMBINATION AIR	3
5	129+75	COMBINATION AIR	3
6	161+36	COMBINATION AIR	3
7	181+33	COMBINATION AIR	3
8	203+98	COMBINATION AIR	3
9	233+36	COMBINATION AIR	3

FAIRFAX COUNTY COMBINATION AIR VALVE AND MANHOLE (CAV)

DETAIL C



VENT PIPE

DETAIL D

NOTES:

- VENT PIPE SHALL BE LOCATED AS SHOWN ON THE PLANS.
- PROVIDE CONCRETE COLLARS AROUND VENT PIPE. IF LOCATED ON PAVEMENT OR SIDEWALK, COLLAR TO BE FLUSH WITH PAVEMENT OR CONCRETE; IF LOCATED ON SOIL OR GRAVEL COLLAR TO EXTEND 1" ABOVE FINISHED GRADE. CONCRETE SHALL BE CLASS S1 CONCRETE PER SECTION 02515.

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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: M. CHENG
 DRAWN BY: C. MILLER
 SHEET CHK'D BY: J. KUNAY
 CROSS CHK'D BY: _____
 APPROVED BY: _____
 DATE: JANUARY 2024

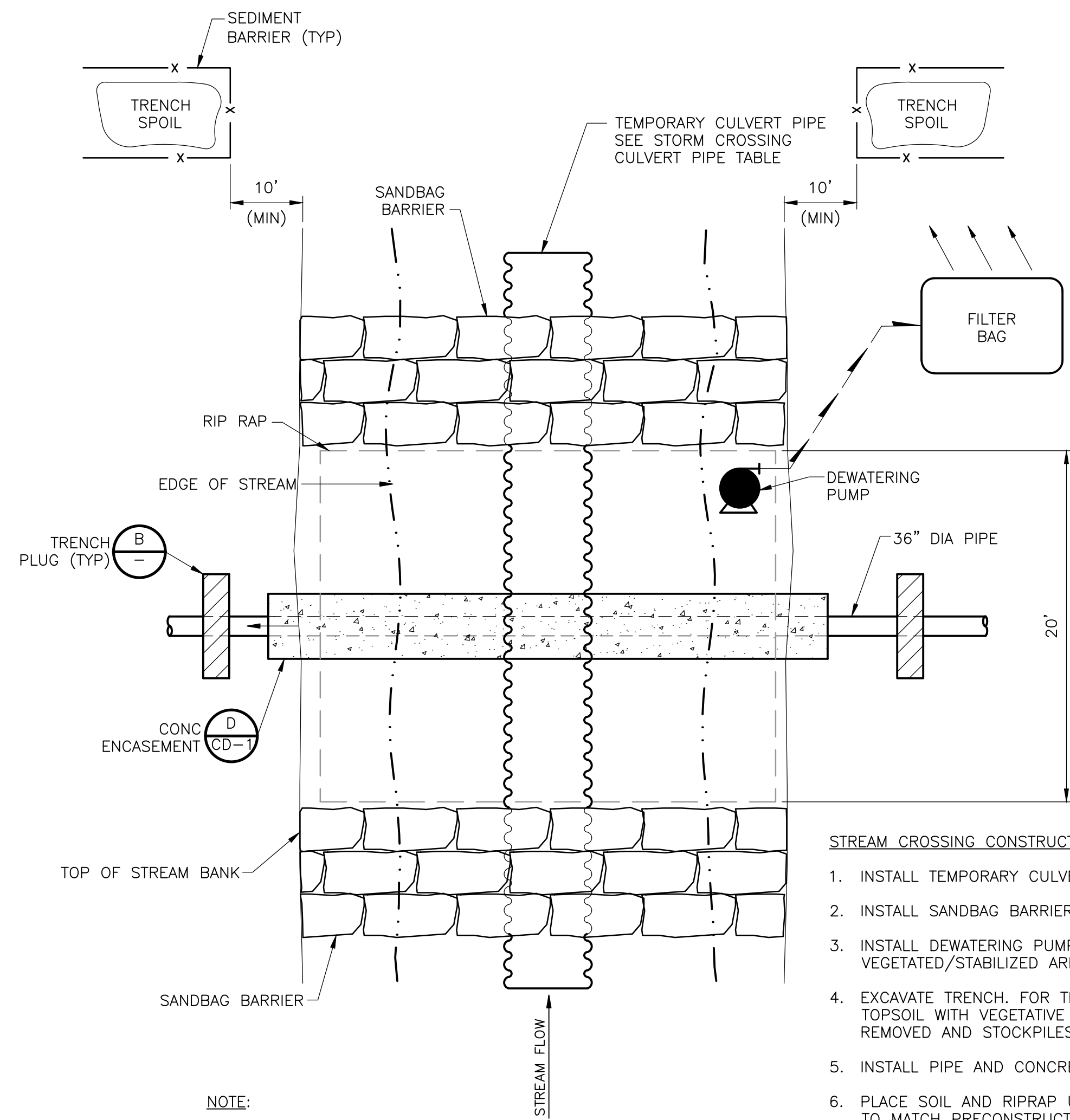
CDM Smith
 10306 Eaton Place, Suite 220
 Fairfax, VA 22030
 Tel: (703) 691-6500

FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 3: GRAVITY SEWER

GENERAL
 DETAILS III

CD-3

PROJECT NO. 5003-244105
FILE NAME: CD03SDDT.DWG
SHEET NO.
CD-3

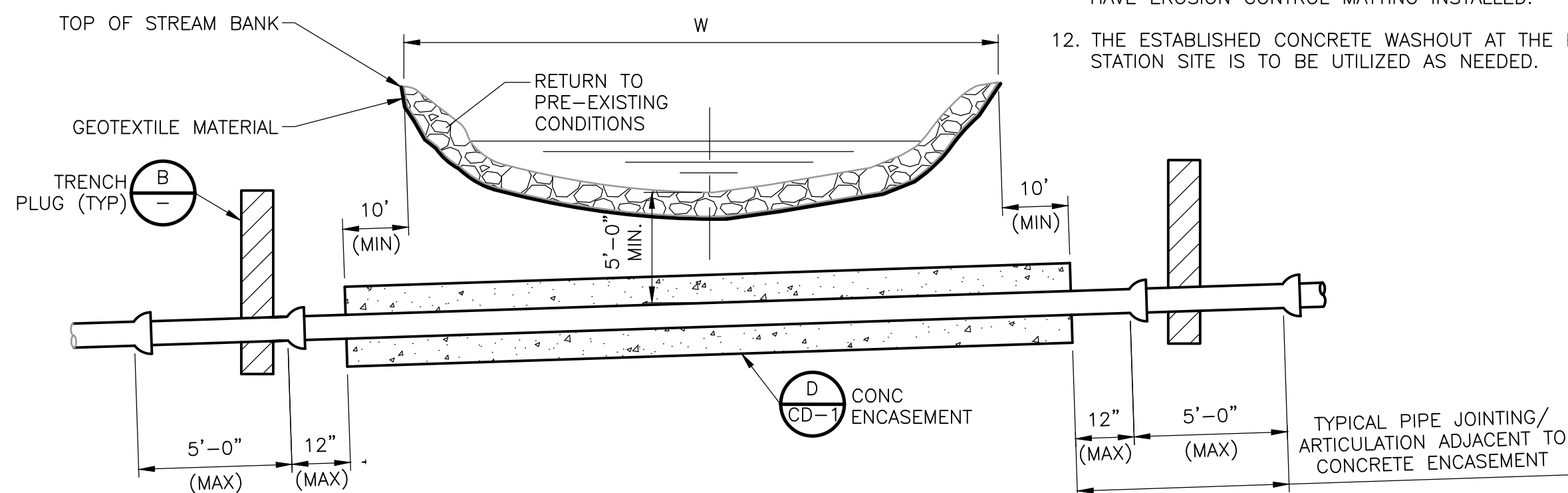


STREAM CROSSING CONSTRUCTION SEQUENCE

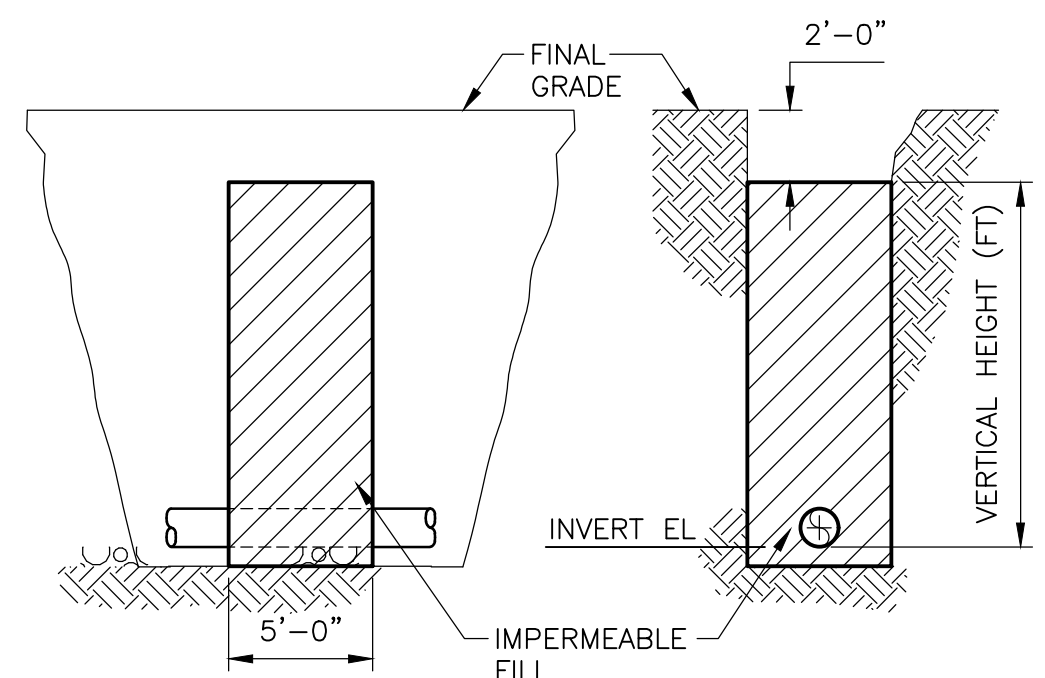
1. INSTALL TEMPORARY CULVERT PIPE AT STREAM INVERT.
2. INSTALL SANDBAG BARRIERS.
3. INSTALL DEWATERING PUMP W/DISCHARGE TO FILTER BAG ON VEGETATED/STABILIZED AREA.
4. EXCAVATE TRENCH. FOR THE WETLANDS, THE EXCAVATED TOPSOIL WITH VEGETATIVE ROOT MASS SHALL BE CAREFULLY REMOVED AND STOCKPILES SEPARATELY FROM THE SUBSOIL.
5. INSTALL PIPE AND CONCRETE CASING.
6. PLACE SOIL AND RIPRAP UP TO TEMPORARY CULVERT PIPE TO MATCH PRECONSTRUCTION STREAM INVERT.
7. FOR WETLAND PLACE TOPSOIL WITHOUT ADDITION OF LIME OR FERTILIZER.
8. SEED THE TOPSOIL AT A RATE OF 40 LB/AC WITH A MIX OF THE FOLLOWING SPECIES. STRAW WITHOUT BINDING AGENTS SHALL THEN BE APPLIED AT A RATE OF 3T/AC.
 URTICA DIOICA (STINGING NETTLE, FACU)
 VIOLA SORORIA (COMMON BLUE VIOLET, FACU)
 POLYGONUM PENNSYLVANICUM (PA SMARTWEED, FACW)
 RUMEX OBTUSIFOLIUS (BITTER DOCK, FACU)
 PHALARIS ARUNDINACEA (REED CANARYGRASS, FACW)
9. REMOVE SANDBAG BARRIERS AND TEMPORARY CULVERT PIPE.
10. COMPLETE THE INSTALLATION OF RIP-RAP TO THE TOP OF THE STREAM BANK.
11. DISTURBED AREAS OUTSIDE OF THE STREAM BANK SHALL HAVE EROSION CONTROL MATTING INSTALLED.
12. THE ESTABLISHED CONCRETE WASHOUT AT THE PUMPING STATION SITE IS TO BE UTILIZED AS NEEDED.

NOTE:
PERFORM STREAM CROSSING CONSTRUCTION IN DRY WEATHER.

STORM CROSSING CULVERT PIPE		
NO.	STATION	SIZE
1	39+37 TO 39+87	48"
2	91+94 TO 92+50	(2) 60"
3	100+53 TO 101+12	48"
4	147+27 TO 147+91	48"
5	218+90 TO 219+55	(2) 48"

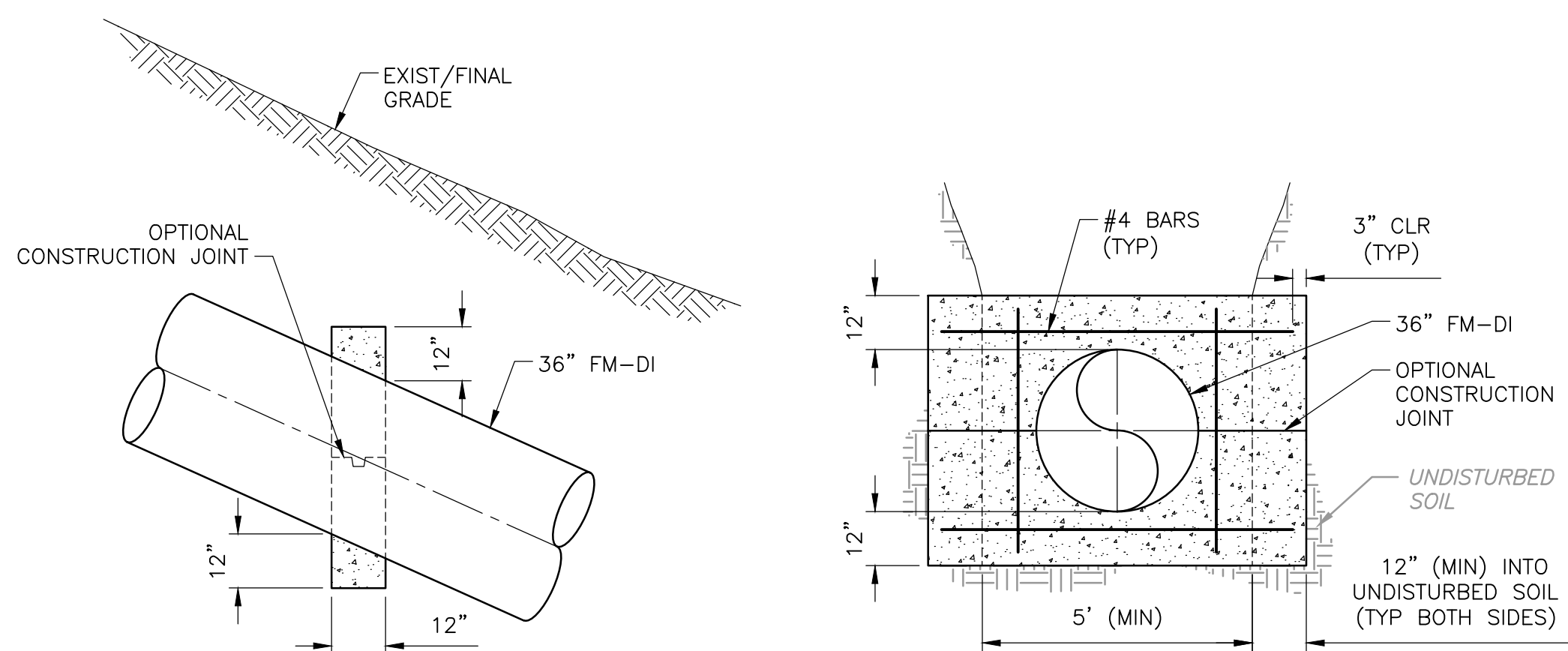


**STREAM CROSSING
DETAIL A**
NTS



- NOTES:**
1. COMPACTED TRENCH PLUG SHALL EXTEND VERTICALLY FROM UNDISTURBED GROUND AT BOTTOM OF TRENCH TO WITHIN TWO (2') FEET OF FINAL GRADE, AND FROM UNDISTURBED GROUND ON TRENCH SIDES FOR FULL WIDTH OF TRENCH.
 2. EACH TRENCH PLUG SHALL CONSIST OF CLAY CONTAINING NO MORE THAN 15% (BY VOLUME) STONE NOT LARGER THAN TWO (2") INCHES IN DIAMETER. CLAY SHALL BE PLACED IN SIX (6") INCH LIFTS AND COMPACTED BY MECHANICAL TAMPER TO NOT LESS THAN 95% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT.
 3. INSTALL AT LEAST ONE CLAY DIKE BETWEEN EACH PAIR OF MANHOLES OR EVERY 1000 FEET WHICHEVER IS LESS, AT BOTH SIDES OF STREAM CROSSINGS AND AT UPSTREAM AND DOWNSTREAM LIMITS OF WETLAND CROSSINGS.

**TRENCH PLUG
DETAIL B**
NTS



- NOTES:**
1. PIPE ANCHORS SHALL BE CONSTRUCTED AT 36" CENTER TO CENTER ON GRADES OF 20% UP TO 35% PERCENT AND 24" CENTER TO CENTER ON GRADES OF 35% UP TO 50%.
 2. CONCRETE SHALL BE CLASS B (4000 PSI).

**CONCRETE ANCHOR
DETAIL C**
NTS

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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY:	G. THOMAS
DRAWN BY:	C. MILLER
SHEET CHK'D BY:	J. KUNAY
CROSS CHK'D BY:	
APPROVED BY:	
DATE:	AUGUST 2024



FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

GENERAL
 DETAILS IV
 CD-4

PROJECT NO.	5003-244105
FILE NAME:	CD04SDDT.DWG
SHEET NO.	CD-4

9VAC25-875-560 MINIMUM STANDARDS

AN EROSION AND SEDIMENT CONTROL PROGRAM ADOPTED BY A DISTRICT OR LOCALITY MUST BE CONSISTENT WITH THE FOLLOWING CRITERIA, TECHNIQUES AND METHODS:

- 1. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 14 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.
2. DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOILS STOCKPILES ON-SITE AS WELL AS BORROW AREAS AND SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE. ANY STOCKPILED MATERIAL WHICH WILL REMAIN IN PLACE LONGER THAN 14 DAYS IS TO BE SEEDED FOR TEMPORARY VEGETATION AND MULCHED. WHERE SPOIL IS PLACED ON THE DOWNHILL SIDE OF TRENCH, IT IS TO BE BACK-SLOPED TO DRAIN TOWARD THE TRENCH. WHEN NECESSARY TO DENATURE THE TRENCH, THE PUMP DISCHARGE HOSE MUST OUTLET IN A STABILIZED AREA OR A SEDIMENT BASIN.
3. A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED THAT IS UNIFORM, MATURE ENOUGH TO SURVIVE AND WILL INHIBIT EROSION.
4. SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.
5. STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.
6. SEDIMENT TRAPS AND SEDIMENT BASINS SHALL BE DESIGNED AND CONSTRUCTED BASED UPON THE TOTAL DRAINAGE AREA TO BE SERVED BY THE TRAP OR BASIN.
7. ALL SLOPES 2:1 AND GREATER SHALL BE SOODED AND STAKED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE ENGINEER. CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SOPE STABILIZING MEASURES UNTIL THE PROBLEM IS CORRECTED.
8. CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME OR SLOPE DRAIN STRUCTURE.
9. WHENEVER WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.
10. ALL STORM SEWER INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LOADED WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.
11. BEFORE NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS OR PIPES ARE MADE OPERATIONAL, ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL.
12. WHERE STREAM CROSSINGS ARE REQUIRED FOR EQUIPMENT, TEMPORARY CULVERTS SHALL BE PROVIDED. WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENCRUSTATION, CONTROL SEDIMENT TRANSPORT AND STABILIZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION. NONERODIBLE MATERIAL SHALL BE USED FOR THE CONSTRUCTION OF CAUSEWAYS AND COFFERDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED BY NONERODIBLE COVER MATERIALS.
13. WHEN A LIVE WATERCOURSE MUST BE CROSSED BY CONSTRUCTION VEHICLES MORE THAN TWICE IN ANY SIX-MONTH PERIOD, A TEMPORARY VEHICULAR STREAM CROSSING CONSTRUCTED OF NONERODIBLE MATERIAL SHALL BE PROVIDED.
14. ALL APPLICABLE FEDERAL, STATE, AND LOCAL CHAPTERS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE MET.
15. THE BED AND BANKS OF A WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IS COMPLETED.
16. UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:
A. NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
B. EXCAVATED MATERIAL SHALL BE PLACED ON UPHILL SIDE OF TRENCHES.
C. EFFLUENT FROM Dewatering OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.
D. MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
E. RE-STABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE REGULATIONS.
F. APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.
17. WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED OR PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY

VEHICULAR TRACKING ONTO THE PAVED SURFACE, WHERE SEDIMENT IS TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER. THIS PROVISION SHALL APPLY TO INDIVIDUAL DEVELOPMENT LOTS AS WELL AS TO LARGER LAND-DISTURBING ACTIVITIES.
18. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED AFTER FINAL SITE STABILIZATION (MS-18) OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE LOCAL PROGRAM AUTHORITY. TRAPPED MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION. FOR ADDITIONAL DETAILS, REFER TO THE CURRENT EDITION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL.
19. PROPERTIES AND WATERWAYS DOWNSTREAM FROM DEVELOPMENT SITES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION, EROSION, AND DAMAGE DUE TO INCREASES IN VOLUME, VELOCITY AND PEAK FLOW RATE OF STORMWATER RUNOFF FOR THE STATED FREQUENCY STORM OF 24-HOUR DURATION IN ACCORDANCE WITH THE FOLLOWING STANDARDS AND CRITERIA. STREAM RESTORATION AND RELOCATION PROJECTS THAT INCORPORATE NATURAL CHANNEL DESIGN CONCEPTS ARE NOT MAN-MADE CHANNELS AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS:

- A. CONCENTRATED STORMWATER RUNOFF LEAVING A DEVELOPMENT SITE SHALL BE DISCHARGED DIRECTLY INTO AN ADEQUATE NATURAL OR MAN-MADE RECEIVING CHANNEL, PIPE OR STORM SEWER SYSTEM. FOR THOSE SITES WHERE RUNOFF IS DISCHARGED INTO A PIPE OR PIPE SYSTEM, DOWNSTREAM STABILITY ANALYSES AT THE OUTFALL OF THE PIPE OR PIPE SYSTEM SHALL BE PERFORMED.
B. ADEQUACY OF ALL CHANNELS AND PIPES SHALL BE VERIFIED IN THE FOLLOWING MANNER:
B.1. THE APPLICANT SHALL DEMONSTRATE THAT THE TOTAL DRAINAGE AREA TO THE POINT OF ANALYSIS WITHIN THE CHANNEL IS ONE HUNDRED TIMES GREATER THAN THE CONTRIBUTING DRAINAGE AREA OF THE PROJECT IN QUESTION;
B.2. OR
B.2.A. (A) NATURAL CHANNELS SHALL BE ANALYZED BY THE USE OF A TWO-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP CHANNEL BED OR BANKS CAUSE EROSION OF CHANNEL OR BANKS.
B.2.B. ALL PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS SHALL BE ANALYZED BY THE USE OF A TEN-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP ITS BANKS AND BY THE USE OF A TWO-YEAR STORM TO DEMONSTRATE THAT STORMWATER WILL NOT CAUSE EROSION OF CHANNEL BED OR BANKS; AND
B.2.C. PIPES AND STORM SEWER SYSTEMS SHALL BE ANALYZED BY THE USE OF A TEN-YEAR STORM TO VERIFY THAT STORMWATER WILL BE CONTAINED WITHIN THE PIPE OR SYSTEM.
C. IF EXISTING NATURAL RECEIVING CHANNELS OR PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS OR PIPES ARE NOT ADEQUATE, THE APPLICANT SHALL:
C.1. IMPROVE THE CHANNELS TO A CONDITION WHERE A TEN-YEAR STORM WILL NOT OVERTOP THE BANKS AND A TWO-YEAR STORM WILL NOT CAUSE EROSION TO CHANNEL THE BED OR BANKS; OR
C.2. IMPROVE THE PIPE OR PIPE SYSTEM TO A CONDITION WHERE THE TEN-YEAR STORM IS CONTAINED WITHIN THE APPURTENANCES;
C.3. DEVELOP A SITE DESIGN THAT WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A TWO YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A NATURAL CHANNEL OR WILL NOT CAUSE THE PREDEVELOPMENT PEAK RUNOFF RATE FROM A TEN-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A MAN-MADE CHANNEL; OR
C.4. PROVIDE A COMBINATION OF CHANNEL IMPROVEMENT, STORMWATER DETENTION OR OTHER MEASURES WHICH IS SATISFACTORY TO THE VESOP AUTHORITY TO PREVENT DOWNSTREAM EROSION.
D. THE APPLICANT SHALL PROVIDE EVIDENCE OF PERMISSION TO MAKE THE IMPROVEMENTS.
E. ALL HYDROLOGIC ANALYSES SHALL BE BASED ON THE EXISTING WATERSHED CHARACTERISTICS AND THE ULTIMATE DEVELOPMENT CONDITION OF THE SUBJECT PROPERTY.
F. IF THE APPLICANT CHOOSES AN OPTION THAT INCLUDES STORMWATER DETENTION, HE OR SHE OBTAIN APPROVAL FROM THE VESOP AUTHORITY. THE DESIGN OF THE DETENTION FACILITIES, THE PLAN SHALL SET FORTH THE MAINTENANCE REQUIREMENTS OF THE FACILITY AND THE PERSON RESPONSIBLE FOR PERFORMING THE MAINTENANCE.
G. OUTFALL FROM A DETENTION FACILITY SHALL BE DISCHARGED TO A RECEIVING CHANNEL, AND ENERGY DISSIPATORS SHALL BE PLACED AT THE OUTFALL OF ALL DETENTION FACILITIES AS NECESSARY TO PROVIDE A STABILIZED TRANSITION FROM THE FACILITY TO THE RECEIVING CHANNEL.
H. ALL ON-SITE CHANNELS MUST BE VERIFIED TO BE ADEQUATE.
I. INCREASED VOLUMES OF SHEET FLOWS THAT MAY CAUSE EROSION OR SEDIMENTATION ON ADJACENT PROPERTY SHALL BE DIVERTED TO A STABLE OUTLET, ADEQUATE CHANNEL, PIPE OR PIPE SYSTEM, OR TO A DETENTION FACILITY.
J. IN APPLYING THESE STORMWATER MANAGEMENT CRITERIA, INDIVIDUAL LOTS OR PARCELS IN A RESIDENTIAL, COMMERCIAL OR INDUSTRIAL DEVELOPMENT SHALL NOT BE CONSIDERED TO BE SEPARATE DEVELOPMENT PROJECTS. INSTEAD, THE DEVELOPMENT, AS A WHOLE, SHALL BE CONSIDERED TO BE A SINGLE DEVELOPMENT PROJECT. HYDROLOGIC PARAMETERS THAT REFLECT THE ULTIMATE DEVELOPMENT CONDITION SHALL BE USED IN ALL ENGINEERING CALCULATIONS.
K. ALL MEASURES USED TO PROTECT PROPERTIES AND WATERWAYS SHALL BE EMPLOYED IN A MANNER WHICH MINIMIZES IMPACTS ON THE PHYSICAL, CHEMICAL AND BIOLOGICAL INTEGRITY OF RIVERS, STREAMS AND OTHER WATERS OF THE STATE.
L. ANY PLAN APPROVED PRIOR TO JULY 1, 2014, THAT PROVIDES FOR STORMWATER MANAGEMENT THAT ADDRESSES ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS SHALL SATISFY THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS IF THE PRACTICES ARE DESIGNED TO:
L.1. DETAIN THE WATER QUALITY VOLUME AND TO RELEASE IT OVER 48 HOURS;
L.2. DETAIN AND RELEASE OVER A 24-HOUR PERIOD THE EXPECTED RAINFALL RESULTING FROM THE ONE YEAR, 24- HOUR STORM; AND
L.3. REDUCE THE ALLOWABLE PEAK FLOW RATE RESULTING FROM THE 1.5, 2, AND 10-YEAR, 24-HOUR STORMS TO A LEVEL THAT IS LESS THAN OR EQUAL TO THE PEAK FLOW RATE FROM THE SITE ASSUMING IT WAS IN A GOOD FORESTED CONDITION, ACHIEVED THROUGH MULTIPLICATION OF THE FORESTED PEAK FLOW RATE BY A REDUCTION FACTOR THAT IS EQUAL TO THE RATIO DIVIDED BY THE RUNOFF VOLUME FROM THE SITE IN ITS PROPOSED CONDITION, AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MAN-MADE CHANNELS AS DEFINED IN ANY REGULATIONS PROMULGATED PURSUANT TO § 10.1-562 OR 10.1-570 OF THE ACT.
M. FOR PLANS APPROVED ON AND AFTER JULY 1, 2014, THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS OF § 10.1-561 A OF THE ACT AND THIS SUBSECTION SHALL BE SATISFIED BY COMPLIANCE WITH WATER QUANTITY REQUIREMENTS IN THE STORMWATER MANAGEMENT ACT (§ 10.1-603.2 ET SEQ. OF THE CODE OF VIRGINIA) AND ATTENDANT REGULATIONS, UNLESS SUCH LAND-DISTURBING ACTIVITIES ARE IN ACCORDANCE WITH 4VAC60-40-48 OF THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMF) PERMIT REGULATIONS. COMPLIANCE WITH THE WATER QUANTITY MINIMUM STANDARDS SET OUT IN 4VAC60-60-66 OF THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMF) PERMIT REGULATIONS SHALL BE DEEMED TO SATISFY THE REQUIREMENTS OF MINIMUM STANDARD 19.
DESIGNED BY: A. NGUYEN
DRAWN BY: A. NGUYEN
SHEET CHK'D BY: A. YEAGLE
CROSS CHK'D BY: C. HENEGAR
APPROVED BY: C. HENEGAR
DATE: AUGUST 2024

EROSION/SEDIMENT CONTROL NARRATIVE:

PROJECT DESCRIPTION - THIS PROJECT INCLUDES THE CONSTRUCTION OF A 23,352 LF SANITARY SEWER FORCE MAIN FROM FLINT HILL ROAD IN VIENNA, VA TO ROUTE 7 IN TYSONS CORNER, VA. THE ASSOCIATED DISTURBED AREA IS 10.18 ACRES. THIS SITE IS LOCATED WITHIN THE DIFFICULT RUN WATERSHED. THE PROPOSED SANITARY FORCE MAIN WILL CONNECT TO A PROPOSED GRADY STATION AT LEESBURG PIKE (ROUTE 7). THE GRADY SEWER WILL CONTINUE TO THE TYSONS WEST PUMP STATION NEAR LEESBURG PIKE AND DULLES TOLL ROAD.
THE PROJECT IS LOCATED WITHIN PUBLIC RIGHT-OF-WAY, PROPERTIES OWNED BY THE FAIRFAX BOARD OF SUPERVISORS, FAIRFAX COUNTY PARK AUTHORITY, NORTHERN VIRGINIA REGIONAL PARK AUTHORITY, AND PRIVATE OWNERS. THE PROPOSED FORCE MAIN ALIGNMENT FOLLOWS FLINT HILL ROAD NORTH TO RIVERA DRIVE, CROSSES AN UNNAMED TRIBUTARY OF PINEY BRANCH, FOLLOWS ABBOTSFORD DRIVE NORTH AND EAST, OVER THE WOOD TRAIL TO ABBOTSFORD DRIVE, CROSSES WELTRAP CREEK, FOLLOWS OLD COURTHOUSE ROAD EAST, THEN WESTWOOD DRIVE AND PINE VALLEY DRIVE TO A CROSSING OF COURTHOUSE SPRING BRANCH, THEN ENDS AT THE PARRING LOT OF 8525 LEESBURG PIKE IN TYSONS CORNER.
EXISTING SITE CONDITIONS - THIS SUBJECT SITE INCLUDES PUBLIC RIGHT-OF-WAYS AND PUBLIC PARK PROPERTY. THE MAJORITY OF THE PROPOSED FORCE MAIN WILL BE CONSTRUCTED BY OPEN CUT TRENCHING IN EXISTING STREETS. ADJACENT PROPERTIES ARE SINGLE FAMILY RESIDENTIAL LOTS. SENSITIVE AREAS ARE LOCATED AT THE PROPOSED STREAM CROSSINGS LOCATED ON PUBLIC PARK PROPERTY. A LARGE POWER TRANSMISSION LINE IS LOCATED NEAR THE WOOD TRAIL CROSSING.
ADJACENT PROPERTY - THE PROJECT AREA IS LOCATED BETWEEN VIENNA AND TYSONS CORNER, VA. THE ADJACENT PROPERTIES ARE PRIMARILY SINGLE FAMILY RESIDENTIAL LOTS.
OFF-SITE AREAS - NO OFF-SITE DISTURBANCE IS ANTICIPATED BY THE PROPOSED PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL EROSION AND SEDIMENT CONTROL MEASURES TO LIMIT DISTURBANCE TO ADJACENT PROPERTIES. EXTREME CARE SHALL BE TAKEN FOR THE DURATION OF CONSTRUCTION ACTIVITIES TO LIMIT IMPACTS TO ADJACENT PROPERTIES LOCATED OUTSIDE OF THE LIMITS OF DISTURBANCE. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO ADJACENT PROPERTIES, ABOVE AND BELOW GROUND UTILITIES, OR ROADWAYS CAUSED OR RESULTING FROM CONSTRUCTION ACTIVITIES. THE CONTRACTOR IS RESPONSIBLE FOR ANY OFF-SITE STAGING AREAS ASSOCIATED WITH CONSTRUCTION OF THIS PROJECT.
SOILS - SEE SOILS INFORMATION ON SHEET C-1.
CRITICAL EROSION AREAS - CRITICAL AREAS INCLUDE WETLANDS AND RESOURCE PROTECTION AREAS (RPA) ASSOCIATED WITH THE PROPOSED STREAM CROSSINGS. CARE SHALL BE TAKEN THROUGHOUT THE DURATION OF CONSTRUCTION TO ENSURE ALL PROPOSED EROSION AND SEDIMENT CONTROL MEASURES ARE PROPERLY MAINTAINED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING CONSTRUCTION ACTIVITIES ARE WITHIN THE LIMITS OF DISTURBANCE. CONTRACTOR SHALL TAKE EXTREME CARE TO AVOID ANY UNNECESSARY DISTURBANCE TO ADJACENT PROPERTIES, ROADWAYS, AND UTILITIES.
EROSION/SEDIMENT CONTROL MEASURES - UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED ACCORDING TO THE STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, COMMONWEALTH OF VIRGINIA E&S CONTROL REGULATIONS, AND TO THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL (PFM). ALL DISTURBED AREAS ARE TO DRAW TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL COMPLETE AND ADEQUATE STABILIZATION IS ACHIEVED. ALL EROSION CONTROL MEASURES SHOWN ON THE APPROVED PLAN MUST BE IN PLACE, INSPECTED, AND APPROVED BY THE DEPARTMENT OF PUBLIC WORKS PRIOR TO CLEARING, STRIPPING OF TOPSOIL OR GRADING.
STRUCTURAL PRACTICES -
1. SAFETY FENCE-3.01 SAFETY FENCE SHALL BE INSTALLED AROUND THE LIMITS OF DISTURBANCE. THE LOCATION OF THE SAFETY FENCE MAY BE ADJUSTED AND/OR REMOVED IN SOME LOCATIONS TO ALLOW FOR CONSTRUCTION ACTIVITIES TO TAKE PLACE. CHANGES IN LOCATION OR REMOVAL OF PORTIONS OF THE FENCE SHALL BE COORDINATED WITH THE COUNTY INSPECTOR.
2. CONSTRUCTION ENTRANCE-3.02 A TEMPORARY CONSTRUCTION ENTRANCE WITH A WASH RACK SHALL BE INSTALLED AT LOCATIONS SHOWN ON THE EROSION CONTROL PLAN. DURING MUDDY CONDITIONS, DRIVERS OF CONSTRUCTION VEHICLES SHALL BE REQUIRED TO WASH THEIR WHEELS BEFORE ENTERING THE STREET TO PREVENT SEDIMENT FROM ENTERING THE STATE ROADWAY SYSTEM.
3. SUPER SILT FENCE BARRIERS SUPER SILT FENCE BARRIERS SHALL BE INSTALLED DOWN SLOPE OF AREAS WITH MINIMAL GRADDES TO FILTER SEDIMENT (LADEN RUNOFF FROM SHEET PLOW.
4. STORM DRAIN INLET PROTECTION-3.02 ALL STORM SEWER INLETS SHALL BE PROTECTED, MAINTAINED, AND MODIFIED AS REQUIRED DURING CONSTRUCTION. SEDIMENT-LOADED WATER SHALL BE FILTERED BEFORE ENTERING THE STORM SEWER INLETS.
5. CULVERT INLET PROTECTION-3.08 CULVERT INLET PROTECTION SHALL BE INSTALLED AS SHOWN ON THE E&S CONTROL PLAN PHASE 1 TO PREVENT SEDIMENT FROM ENTERING, ACCUMULATING IN, AND BEING TRANSPORTED BY A CULVERT PRIOR TO PROPOSED DEVELOPMENT.
VEGETATIVE PRACTICES -
1. TEMPORARY SEEDING-3.11 ALL DENUDED AREAS WHICH WILL BE LEFT DORMANT FOR A PERIOD LONGER THAN 14 DAYS SHALL BE SEEDED WITH FAST GERMINATING TEMPORARY VEGETATION WITHIN 7 DAYS OF GRADING ACTIVITIES. TEMPORARY SEEDING SHALL BE APPLIED TO ALL DENUDED AREAS WHENEVER FINAL GRADE HAS BEEN REACHED ON ANY PORTION OF THE SITE. SELECTION OF THE SEEDING MIXTURE WILL DEPEND ON THE TIME OF THE YEAR IT IS APPLIED.
2. PERMANENT SEEDING-3.32 PERMANENT SOIL STABILIZATION SHALL BE APPLIED ON ROUGH-GRADED AREAS THAT WILL NOT BE BROUGHT TO FINAL GRADE FOR A YEAR OR MORE OR WHERE PERMANENT, LONG-LIVED VEGETATIVE COVER IS NEEDED ON FINE-GRADED AREAS. PERMANENT SEEDING SHALL CONSIST OF PERENNIAL VEGETATIVE COVER AND SHALL BE DETERMINED BY THE SLOPES, SOIL TYPES, AND MAINTENANCE REQUIREMENTS.
3. MULCHING-3.35 AREAS THAT HAVE HAD MULCHING APPLIED SHALL BE CHECKED REGULARLY TO CHECK FOR EROSION. ADDITIONAL MULCH SHALL BE APPLIED WHEN IT IS CLEAR THAT EROSION IS OCCURRING. AREAS WITH MULCHING SHALL BE INSPECTED UNTIL GRASSES ARE FIRMLY ESTABLISHED. MULCH APPLIED WITH ORNAMENTAL PLANTINGS SHALL BE INSPECTED REGULARLY, AND REPAIRED IF REQUIRED, TO MAINTAIN COVERAGE OF THE SOIL SURFACE.
MANAGEMENT STRATEGIES -
1. CONSTRUCTION SHOULD BE SEQUENCED SO THAT GRADING OPERATIONS CAN BEGIN AND END AS QUICKLY AS POSSIBLE.
2. SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AS A FIRST STEP IN GRADING AND WILL BE SEEDED AND MULCHED IMMEDIATELY FOLLOWING INSTALLATION.
3. TEMPORARY SEEDING OR OTHER STABILIZATION SHALL FOLLOW IMMEDIATELY AFTER GRADING. AREAS WHICH ARE NOT TO BE DISTURBED INCLUDING RPA, EROSION PLAN, AND WETLAND LIMITS SHALL BE CLEARLY MARKED BY FLAGS, SIGNS, ETC. ALL EXISTING WETLAND AREAS SHALL BE STAKED AND BE PROTECTED BY ORANGE SAFETY FENCE PRIOR TO MOBILIZATION ON SITE AND INSTALLATION OF REMAINING EROSION PROTECTION MEASURES.
4. THE REGISTERED LAND DISTURBER (RLD) SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL PRACTICES, INCLUDING THOSE REQUIRED BY THE FAIRFAX COUNTY INSPECTOR IN THE FIELD THAT MAY BE IN ADDITION TO THOSE SHOWN ON THIS PLAN. THE CONTRACTOR AND/OR RLD HAVE THE OPTION OF INSTALLING, AT THEIR EXPENSE, ADDITIONAL EROSION AND SEDIMENT CONTROL PRACTICES THAT THEY DEEM NECESSARY DURING CONSTRUCTION TO PREVENT THE RUNOFF OF SEDIMENT-LOADED WATER.
5. WHEN SEDIMENT IS TRANSPORTED ONTO A PAVED ROAD SURFACE, THE ROAD SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING WILL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER.
6. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES ARE NO LONGER NEEDED, AS AUTHORIZED BY THE COUNTY INSPECTOR, TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES WILL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.
PERMANENT STABILIZATION - ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE STABILIZED WITH PERMANENT SEEDING WITHIN 7 DAYS OF FINISHED GRADING. SEEDING WILL BE DONE IN ACCORDANCE WITH SEED MIXTURES SPECIFIED IN THE STD. AND SPEC. 3.32 OF THE VA. E&S CONTROL HANDBOOK. PLEASE REFER TO THIS SHEET FOR SITE SPECIFIC SEEDING MIXTURES FOR THE PREDMONT AREA. PERMANENTLY SEEDED AREAS SHALL BE PROTECTED DURING ESTABLISHMENT WITH STRAW MULCH. (TEMPORARY SEEDING IS REQUIRED WITHIN 7 DAYS OF ROUGH GRADING IF THE DISTURBED AREA IS NOT BROUGHT TO FINISH GRADE WITHIN THE 14 DAYS.) PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.
STORMWATER MANAGEMENT - THIS PROJECT WILL NOT INCREASE THE AMOUNT OF IMPERVIOUS AREA. SOME TREE CANOPY WILL BE REMOVED. AS A RESULT, CALCULATION OF RUNOFF BEFORE AND AFTER DEVELOPMENT INDICATES THAT THERE WILL BE NO INCREASE IN PEAK RUNOFF. BMP AND SWM REQUIREMENTS FOR THIS SITE HAVE BEEN MET BY SHEETS C-1 TO C-6. FOR STORMWATER COMPUTATIONS AND DETAILS.
PHASE 1 SEDIMENT AND EROSION CONTROL PROGRAM - THE FIRST PHASE OF THE PROGRAM IS DEVELOPED TO INSTALL ALL PERMETER CONTROLS. THE LIMITS OF CLEARING IS LIMITED TO THE AREA ONLY NEEDED TO ACCOMPLISH THIS:
1. THE CONTRACTOR SHALL SCHEDULE AND HOLD A PRE-CONSTRUCTION MEETING WITH THE COUNTY INSPECTOR PRIOR TO ANY WORK OR PLACING ANY CONTROLS.
2. INSTALL CONSTRUCTION ENTRANCE IN THE LOCATION SHOWN ON THE PLANS. THE CONSTRUCTION ENTRANCE SHALL BE INSTALLED UTILIZING A WASH RACK. THE CONSTRUCTION ENTRANCE SHALL REMAIN IN PLACE THROUGHOUT THE DURATION OF CONSTRUCTION WATER REQUIRED TO CLEAN VEHICLES WILL BE VIA A WATER TRUCK OR OTHER SOURCE. ALL VEHICLES SHALL BE CLEANED OF EXCESS DIRT AND MUD PRIOR TO EXITING THE SITE AND ENTERING THE STATE ROAD SYSTEM.
3. INSTALL SUPER SILT FENCE AND SAFETY FENCE IN THE LOCATIONS SHOWN ON THE PLAN.
4. ONCE ALL PHASE 1 CONTROLS ARE PLACED, THE SUPERINTENDENT IS TO CONTACT THE COUNTY INSPECTOR FOR SIGN OFF. ONCE SIGNED OFF BY THE COUNTY, THE CONTRACTOR CAN PROCEED WITH PHASE 2.
PHASE 2 SEDIMENT AND EROSION CONTROL PROGRAM - AFTER ROUGH GRADING IS ACHIEVED AND SUBSURFACE UTILITIES HAVE BEEN INSTALLED THE CONTRACTOR SHALL TRANSITION THE PROJECT INTO THE PHASE TWO SEDIMENT AND EROSION CONTROL PROGRAM. IT IS INTENDED THAT PERMETER CONTROLS BE MAINTAINED THROUGHOUT THE EARTHWORK PHASE AND/OR UNTIL UPSTREAM AREAS HAVE BEEN STABILIZED.
1. THE REMAINING AREAS OF THE SITE SHOULD BE CLEARED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO STOCKPILE ANY NECESSARY TOPSOIL NEEDED FOR FINAL GRADING PURPOSES. IT IS UP TO THE CONTRACTOR AS TO HOW AND WHERE TO STORE THE STOCKPILE ON OR OFF-SITE SO THAT IT DOES NOT CONFLICT WITH GRADING OPERATIONS. ALL EXCESS TOPSOIL IS TO BE DISPOSED OF BY THE CONTRACTOR.
2. ONCE ENTIRE SITE IS CLEARED, MASS GRADING CAN COMMENCE. ANY BLASTING THAT MAY BE REQUIRED MUST BE APPROVED BY THE COUNTY.
3. PLACE INLET PROTECTION AS REQUIRED.
4. FINE GRADE SITE.
5. SURFACE ROUGHEN ALL SLOPE AREAS OF 6:1 AND STEEPER.
6. LIME, FERTILIZER, PERMANENTLY SEED AND MULCH ALL AREAS AS REQUIRED.
7. ONCE ALL AREAS ARE STABILIZED, TO THE SATISFACTION OF THE COUNTY, THE CONTRACTOR SHALL REMOVE ALL PERMETER CONTROLS.
8. CLEAN SITE OF ALL TRASH AND DEBRIS.
SEDIMENT AND EROSION CONTROL MAINTENANCE PROGRAM - IN GENERAL, ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED DAILY AND AFTER EACH SIGNIFICANT RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES MUST BE MADE IMMEDIATELY AFTER THE INSPECTION. THE FOLLOWING ITEMS SHALL BE CHECKED IN PARTICULAR:
1. SUPER SILT FENCE BARRIERS WILL BE CHECKED REGULARLY FOR UNDERMINING OR DETEIORATION OF THE FABRIC. SEDIMENT SHALL BE REMOVED WHEN THE LEVEL OF THE SEDIMENT DEPOSITION REACHES HALF WAY TO THE TOP OF THE BARRIER.
2. SEEDED AREAS SHALL BE CHECKED REGULARLY TO ENSURE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED AND RE-SEEDED AS NEEDED. ALL NEWLY SEEDED AND MULCHED AREAS SHALL BE INSPECTED AFTER EACH RAINFALL EVENT TO INSURE THAT THE NEW SEED HAS NOT BEEN WASHED AWAY. IF SO, THE AREAS SHALL BE RE-SEEDED IMMEDIATELY.
3. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR (REGISTERED LAND DISTURBER) TO INSURE THAT ALL DOWNSTREAM AREAS ARE PROTECTED AGAINST EROSION AND SEDIMENT. IN DOING SO, CONTRACTOR MUST COORDINATE WITH FAIRFAX COUNTY STAFF THROUGHOUT THE DURATION OF THIS PROJECT.
4. ALL EROSION AND SEDIMENT CONTROL MEASURES SUCH AS SUPER SILT FENCE, SHALL BE MAINTAINED AT ALL TIMES. EACH EROSION CONTROL MEASURE MUST BE CHECKED FOLLOWING ANY STORM EVENT TO ENSURE THAT IT IS FUNCTIONING PROPERLY.
5. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL CONSTRUCTION VEHICLES ARE CLEANED PRIOR TO ENTERING THE STATE ROAD SYSTEM.
6. THE CONTRACTOR DOES HAVE THE AUTHORITY TO ADD ADDITIONAL SEDIMENT-EROSION CONTROL MEASURES SHOULD HE/SHE FEEL IT IS NECESSARY TO PREVENT SILTATION OR EROSION OFFSITE. AUTHORIZATION FOR ADDITIONAL EROSION CONTROL MEASURES SHALL BE PROVIDED BY THE COUNTY INSPECTOR.
GENERAL EROSION AND SEDIMENT CONTROL NOTES
ES-1) UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND VIRGINIA REGULATIONS VR 625-02-00 EROSION AND SEDIMENT CONTROL REGULATIONS.
ES-2) THE PLAN APPROVING AUTHORITY MUST BE NOTICED ONE WEEK PRIOR TO THE PRECONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF THE LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION.
ES-3) ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP OF LAND DISTURBING ACTIVITIES.
ES-4) A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
ES-5) PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF-SITE BORROW OR WASTE AREAS), THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE PLAN APPROVING AUTHORITY.
ES-6) THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE PLAN APPROVING AUTHORITY. MEASURES TO CONTROL EROSION AND SILTATION SHALL BE PROVIDED PURSUANT TO AND IN COMPLIANCE WITH CURRENT FEDERAL, STATE, AND LOCAL REGULATIONS. THE INFORMATION CONTAINED IN THE CONSTRUCTION PLANS AND/OR THE APPROVAL OF THE PLANS SHALL IN NO WAY RELIEVE THE CONTRACTOR OR HIS AGENT OF ANY LEGAL RESPONSIBILITY WHICH MAY BE REQUIRED BY THE CODE OF VIRGINIA OR ANY ORDINANCE ENACTED BY THE COUNTY OF FAIRFAX.
ES-7) ALL DISTURBED AREAS ARE TO DRAW TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.
ES-8) DURING DE-WATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.
ES-9) THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY BEFORE, DURING, AND AFTER EACH RUNOFF-PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.
ES-10) THE FAIRFAX COUNTY INSPECTOR HAS THE AUTHORITY TO ADD, MODIFY OR DELETE EROSION AND SEDIMENT CONTROLS AS NEEDED IN THE FIELD, AS SITE CONDITIONS WARRANT.
ES-11) NO SEDIMENT TRAPS OR BASINS SHALL BE REMOVED WITHOUT PRIOR APPROVAL OF THE COUNTY INSPECTOR.
ES-12) AN EROSION AND SEDIMENT CONTROL CONTRACTOR CERTIFICATION (E.S.C.C.C.) IS REQUIRED FOR ALL LAND DISTURBING ACTIVITIES.
ES-13) NO AREA SHALL BE DENUDED AND NOT BE DISTURBED FOR A PERIOD LONGER THAN 14 DAYS IN ACCORDANCE WITH THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL.

GENERAL LAND CONSERVATION NOTES

- 1. NO DISTURBED AREA WHICH IS NOT ACTIVELY BEING WORKED SHALL REMAIN DENUDED FOR MORE THAN 14 CALENDAR DAYS UNLESS OTHERWISE AUTHORIZED BY FAIRFAX COUNTY IN ACCORDANCE WITH THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL.
2. ALL E&S CONTROL MEASURES APPROVED WITH THE PHASE 1 E&S CONTROL PLAN SHALL BE PLACED AS THE FIRST STEP IN GRADING AND PRIOR TO ANY LAND DISTURBING OPERATIONS.
3. ALL STORM AND SANITARY SEWER LINES NOT IN STREETS SHALL BE SEEDED AND MULCHED WITHIN 14 DAYS AFTER BACKFILL. NO MORE THAN 500 FT. OF TRENCH SHALL BE OPEN AT ANY ONE TIME.
4. ELECTRIC POWER, TELEPHONE AND GAS SUPPLY TRENCHES SHALL BE COMPACTED, SEEDED AND MULCHED WITHIN 14 DAYS AFTER BACKFILL.
5. ALL TEMPORARY EARTH BERMS, DIVERSIONS AND SEDIMENT CONTROL DAMS SHALL BE SEEDED AND MULCHED FOR TEMPORARY VEGETATIVE COVER IMMEDIATELY (AS SOON AS POSSIBLE BUT NO LATER THAN 48 HOURS) AFTER COMPLETION OF GRADING. STRAW OR HAY MULCH IS REQUIRED. ALL SOIL STOCKPILES SHALL BE SEEDED AND MULCHED WITHIN 14 DAYS AFTER GRADING.
6. DURING CONSTRUCTION, ALL STORM SEWER INLETS SHALL BE PROTECTED BY SEDIMENT TRAPS, MAINTAINED AND MODIFIED DURING CONSTRUCTION PROGRESS AS REQUIRED.
7. ANY DISTURBED AREA NOT COVERED BY SECTION 11-0304.1 OF THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL AND NOT PAVED, SOODED OR BUILT UPON BY NOVEMBER 1, OR DISTURBED AFTER THAT DATE, SHALL BE MULCHED IMMEDIATELY WITH HAY OR STRAW MULCH AT THE RATE OF 2 TONS/ACRE AND OVER-SEEDED BY APRIL 15.
8. SEDIMENT CONTROLS SHALL BE REMOVED FROM CONTRIBUTING DRAINAGE AREAS AS THEY BECOME STABILIZED. AT THE COMPLETION OF ANY PROJECT CONSTRUCTION AND PRIOR TO BOND RELEASE, ALL TEMPORARY SEDIMENT CONTROLS SHALL BE REMOVED, AND ALL DENUDED AREAS SHALL BE STABILIZED.

FAIRFAX COUNTY PRIORITY RATING FORM FOR E&S CONTROL

PROJECT NAME: TYSONS WASTEWATER CONVEYANCE SYSTEM
MODIFICATIONS PROJECT: PACKAGE 4; FORCE MAIN PROJECT NUMBER: 5003-244105
TAX MAP: 28-3, 28-4, 29-3, 38-1, 38-3 EVALUATOR: RDA DATE: AUGUST 2024
A. PERCENTAGE OF DENUDED AREA TO TOTAL SITE AREA
RATING
• > 60% [X] 5
• 31 to 60% [] 3
• 10 to 30% [] 1
IF THE DENUDED AREA IS GREATER THEN 10 ACRES, THE PROJECT IS INITIALLY RATED A HIGH PRIORITY.
B WATERCOURSE CROSSING
RATING
YES [X] *
NO [] 0
*IF YES, PROJECT IS INITIALLY RATED A HIGH PRIORITY.
C DISTANCE OF DENUDED AREA TO DOWNSTREAM ADJACENT PROPERTY
RATING
• < 50 FEET [X] 5
• 50 TO 150 FEET [] 3
• > 150 FEET [] 0
D DISTANCE OF ANY PORTION OF THE DENUDED AREA TO A NATURAL WATERCOURSE
RATING
• < 50 FEET [X] 5
• 50 TO 150 FEET [] 3
• > 150 FEET [] 0
E MINIMUM VEGETATIVE BUFFER (TREES, SHRUBS, GRASSES AND OTHER PLANTS)
RATING
• < 50 FEET [X] 0
• 50 TO 150 FEET [] -3
• > 150 FEET [] -5
* VEGETATION IN RESOURCE PROTECTION AREAS ARE NOT TO BE INCLUDED AS VEGETATIVE BUFFERS FOR THIS APPLICATION
OVERALL RATING
IF > 22 HIGH X
IF > 14 AND < OR = TO 22 MEDIUM
IF < OR = TO 14 LOW
PROJECT PRIORITY LEVEL:
RESERVED FOR FAIRFAX COUNTY USE
APPROVED BY: PLAN REVIEWER DATE:

TEMPORARY SEEDING REQUIREMENTS -

- 1. LIMING: AN EVALUATION SHALL BE CONDUCTED TO DETERMINE IF LIME IS NECESSARY FOR TEMPORARY SEEDING. IN MOST SOILS, IT TAKES UP TO 6 MONTHS FOR A PH ADJUSTMENT TO OCCUR FOLLOWING THE APPLICATION OF LIME. THEREFORE, IT MAY BE DIFFICULT TO JUSTIFY THE COST OF LIMING A TEMPORARY SITE, ESPECIALLY WHEN THE SOIL WILL LATER BE MOVED AND REGRADED. TABLE 3.31A (ON SHEET ES-2) MAY BE USED TO DETERMINE THAT ACTUAL NEED ALONG WITH SUGGESTED APPLICATION RATES.
2. FERTILIZER: SHALL BE APPLIED AT 600 LBS./AC. OF 10-20-10 OR EQUIVALENT NUTRIENTS. LIME AND FERTILIZER SHALL BE INCORPORATED INTO THE TOP 2 TO 4 INCHES OF THE SOIL.
3. SEEDING: SEEDING SHALL BE APPLIED WITH A BROADCAST SEEDER, DRILL, CULTPACKER SEEDER OR HYDROSEEDER. SMALL GRAINS SHALL BE PLANTED NO MORE THAN ONE INCH DEEP. GRASSES AND LEGUMES SHALL BE PLANTED WITH NO LESS THAN ¼" SOIL COVER. FOR SEED SELECTION AND RATES SEE TABLE 3.31-B (ON SHEET ES-2).
FOR THE AREAS OUTSIDE THE VIRGINIA DEPARTMENT OF TRANSPORTATION RIGHT-OF-WAY, THE SEED SHALL CONSIST OF A MIXTURE OF KENTUCKY 31 TALL FESCUE AND KENBLUE IN ACCORDANCE WITH DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES' SPECIFICATIONS OR COUNTY APPROVED ALTERNATE SEED.
4. MULCHING: SEEDINGS MADE IN FALL FOR WINTER COVER AND DURING HOT AND DRY SUMMER MONTHS SHALL BE MULCHED ACCORDING TO MULCHING, STD. & SPEC. 3.35 (TABLE 3.35-A PROVIDED ON SHEET ES-2). EXCEPT THAT HYDROMULCHES (FIBER MULCH) WILL NOT BE CONSIDERED ADEQUATE. STRAW MULCH SHALL BE USED DURING THESE PERIODS. TEMPORARY SEEDINGS MADE UNDER FAVORABLE SOIL AND SITE CONDITIONS DURING OPTIMUM SPRING AND FALL SEEDING DATES MAY NOT REQUIRE MULCH.

PERMANENT SEEDING REQUIREMENTS -

- 1. LIMING & FERTILIZING: LIME AND FERTILIZER NEEDS SHALL BE DETERMINED BY SOILS TESTS. SOIL TESTS MAY BE PERFORMED BY THE COOPERATIVE EXTENSION SERVICE, SOIL TESTING LABORATORY AT VIRSU, OR BY A REPUTABLE COMMERCIAL LABORATORY. INFORMATION CONCERNING THE STATE SOIL TESTING LABORATORY IS AVAILABLE FROM COUNTY EXTENSION AGENTS. IF SOIL TESTS ARE NOT POSSIBLE, DUE TO UNUSUAL CONDITIONS, SEE THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK SECTION 3.32 FOR LIMING AND FERTILIZER NEEDS.
2. SEEDING: SEEDING SHALL BE APPLIED WITH A BROADCAST SEEDER, DRILL, CULT-PACKER SEEDER, OR HYDROSEEDER ON A FIRM, FRABLE SEEDBED. SEEDING DEPTH SHALL BE ¼ TO ½ INCH. FOR SEED SELECTION AND RATES SEE TABLE 3.32-2 (ON SHEET ES-2).
3. MULCHING: ALL PERMANENT SEEDING MUST BE MULCHED IMMEDIATELY UPON COMPLETION OF SEED APPLICATION. REFER TO MULCHING, STD. & SPEC. 3.35 (TABLE 3.35-A, ON SHEET ES-2).

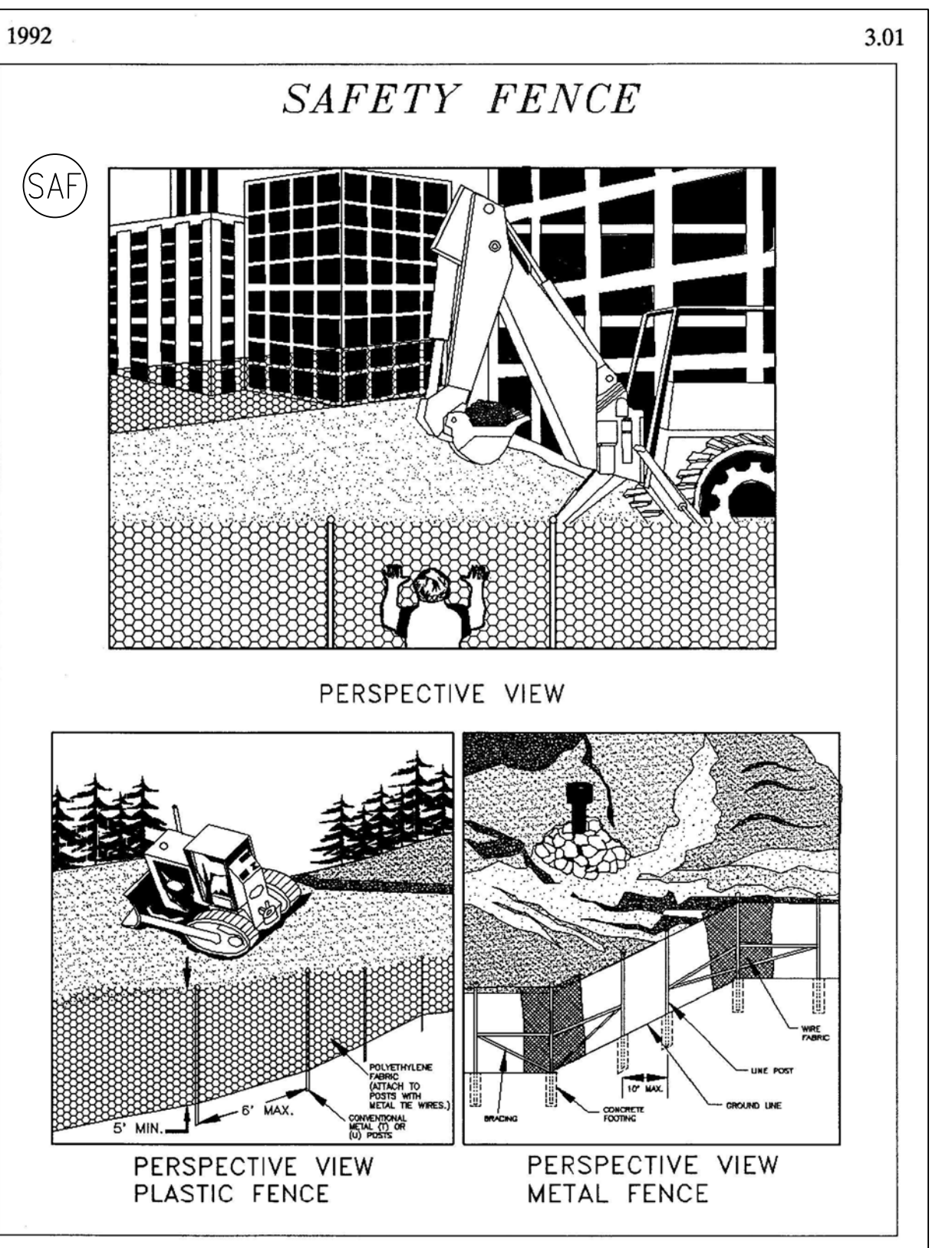
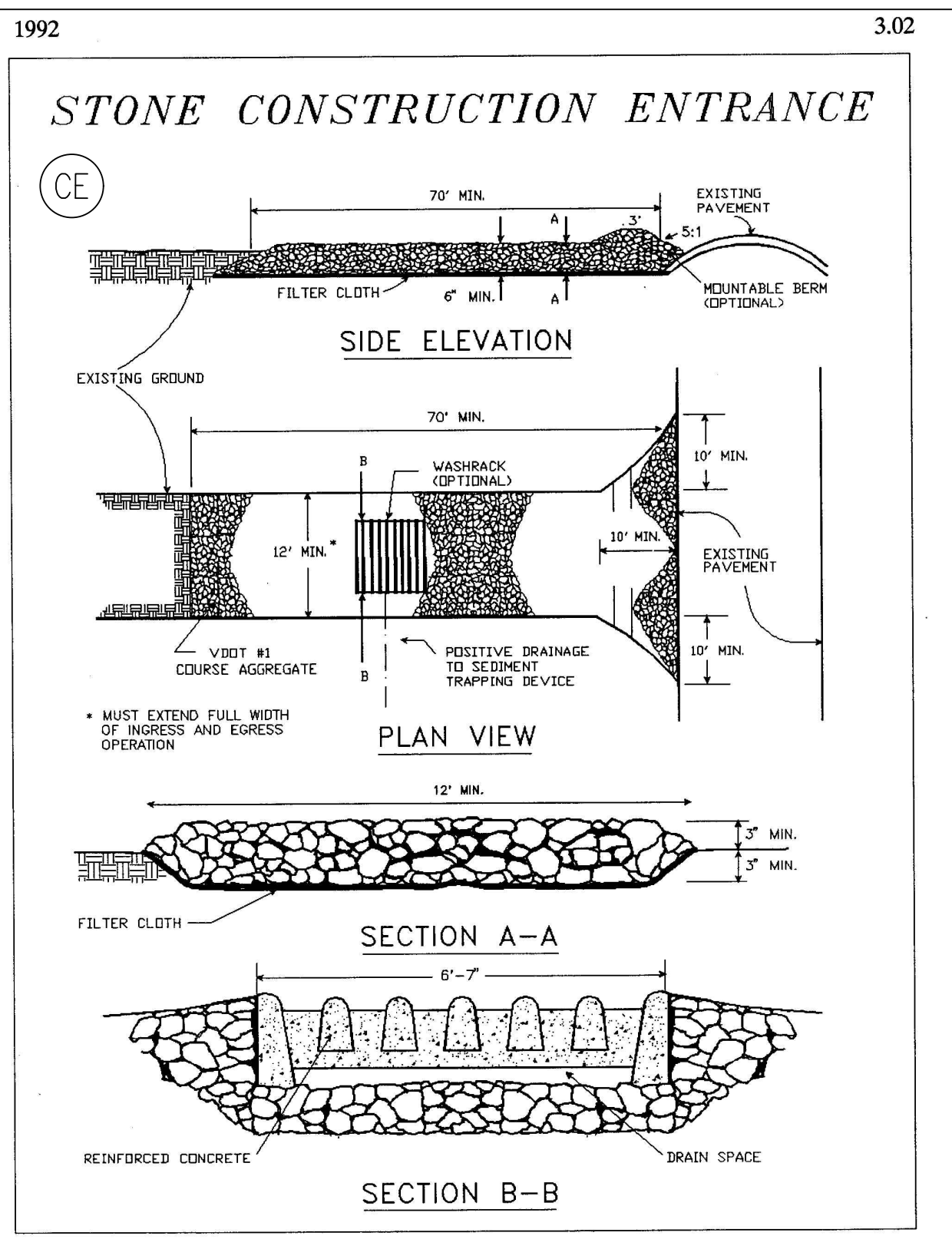
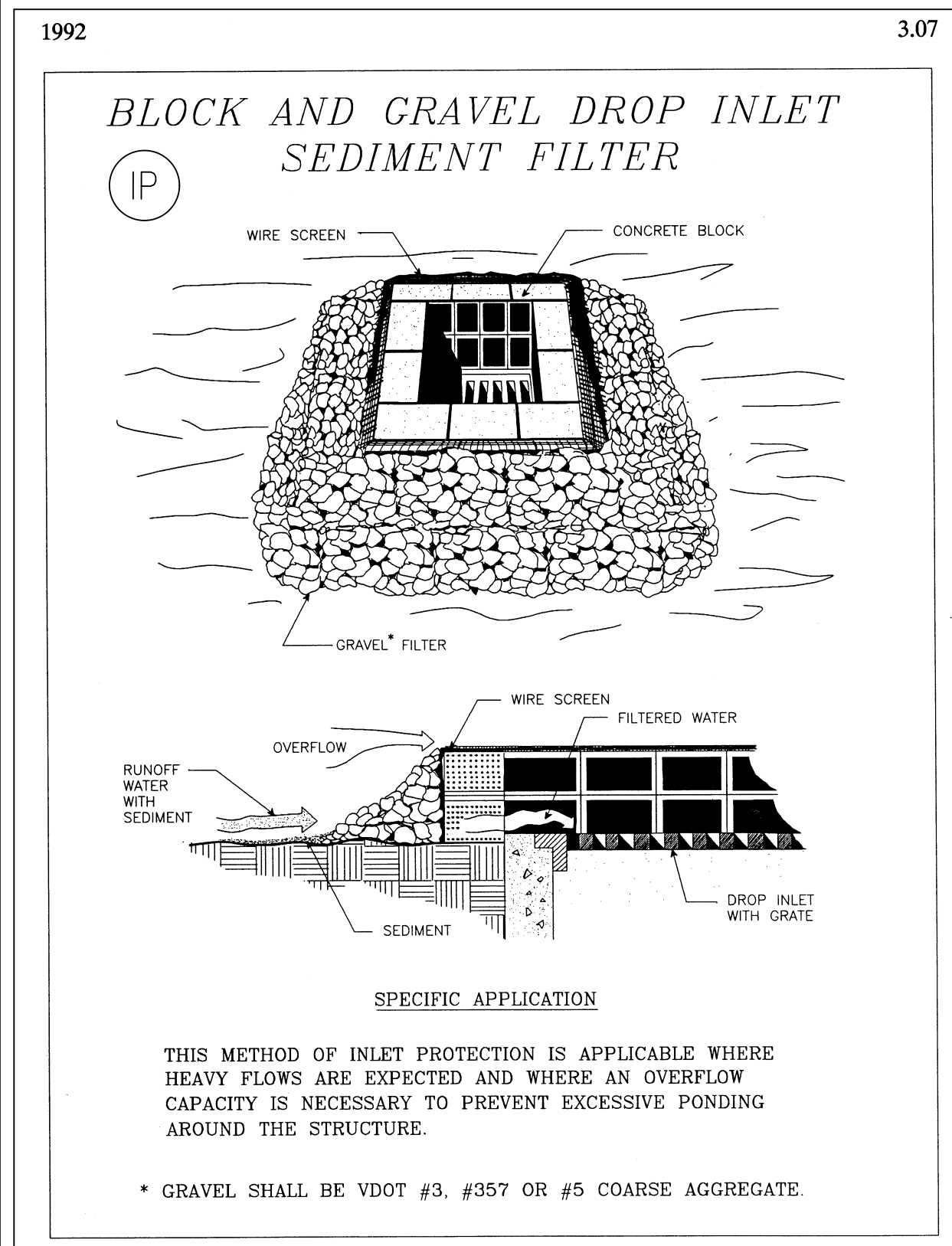
Table with columns: REV. NO., DATE, DRWN, CHKD, REMARKS

Table with columns: DESIGNED BY, DRAWN BY, SHEET CHK'D BY, CROSS CHK'D BY, APPROVED BY, DATE

CDM Smith logo and contact information: 10306 Eaton Place, Suite 500, Fairfax, VA 22030, Tel: (703) 691-6500

FAIRFAX COUNTY, VIRGINIA
DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
TYSONS WASTEWATER CONVEYANCE SYSTEM
MODIFICATIONS
PACKAGE 4: FORCE MAIN

Table with columns: PROJECT NO., FILE NAME, SHEET NO., ES-1



7A-2

CHECKLIST FOR EROSION AND SEDIMENT CONTROL PLANS

Minimum Standards - All applicable Minimum Standards must be addressed.

NARRATIVE

ES-1 Project description - Briefly describes the nature and purpose of the land-disturbing activity, and the area (acres) to be disturbed.

ES-1 Existing site conditions - A description of the existing topography, vegetation and drainage.

ES-1 Adjacent areas - A description of neighboring areas such as streams, lakes, residential areas, roads, etc., which might be affected by the land disturbance.

ES-1 Off-site areas - Describe any off-site land-disturbing activities that will occur (including borrow sites, waste or surplus areas, etc.). Will any other areas be disturbed?

ES-1 Soils - A brief description of the soils on the site giving such information as soil name, mapping unit, erodibility, permeability, depth, texture and soil structure.

ES-1 Critical areas - A description of areas on the site which have potentially serious erosion problems (e.g., steep slopes, channels, wet weather/underground springs, etc.).

ES-1 Erosion and sediment control measures - A description of the methods which will be used to control erosion and sedimentation on the site. (Controls should satisfy minimum standards in Chapter 3.)

ES-1 Permanent stabilization - A brief description, including specifications, of how the site will be stabilized after construction is completed.

Stormwater runoff considerations - Will the development site cause an increase in peak runoff rates? Will the increase in runoff cause flooding or channel degradation downstream? Describe the strategy to control stormwater runoff.

Calculations - Detailed calculations for the design of temporary sediment basins, permanent stormwater detention basins, diversions, channels, etc. Include calculations for pre- and post-development runoff.

COVER

C-1 TO C-30 Vicinity map - A small map locating the site in relation to the surrounding area. Include any landmarks which might assist in locating the site.

C-1 TO C-30 Indicate north - The direction of north in relation to the site.

C-1 TO C-30 Limits of clearing and grading - Areas which are to be cleared and graded.

ES-3 TO EX-21 Existing contours - The existing contours of the site.

C-1 TO C-30 Final contours - Changes to the existing contours, including final drainage patterns.

TP-2 TO TP-3 Existing vegetation - The existing tree lines, grassed areas, or unique vegetation.

Soils - The boundaries of different soil types.

Existing drainage patterns - The dividing lines and the direction of flow for the different drainage areas. Include the size (acreage) of each drainage area.

ES-1 Critical erosion areas - Areas with potentially serious erosion problems. (See Chapter 6 for criteria.)

C-1 TO C-30 Site Development - Show all improvements such as buildings, parking lots, access roads, utility construction, etc.

ES-3 TO EX-21 Location of practices - The locations of erosion and sediment control and stormwater management practices used on the site. Use the standard symbols and abbreviations in Chapter 3 of the E&S Handbook.

ES-1 Off-site areas - Identify any off-site land-disturbing activities (e.g., borrow sites, waste areas, etc.). Show location of erosion controls. (Is there sufficient information to assure adequate protection and stabilization?)

ES-2 Detail drawings - Any structural practices used that are not referenced to the E&S Handbook or local handbooks should be explained and illustrated with detail drawings.

ES-1 Maintenance - A schedule of regular inspections and repair of erosion and sediment control structures should be set forth.

PS

TABLE 3.32-D
SITE SPECIFIC SEEDING MIXTURES FOR PIEDMONT AREA

Minimum Care Lawn	Total Lbs. Per Acre
- Commercial or Residential	175-200 lbs.
- Kentucky 31 or Turf-Type Tall Fescue	95-100%
- Improved Perennial Ryegrass	0-5%
- Kentucky Bluegrass	0-5%
High-Maintenance Lawn	200-250 lbs.
- Kentucky 31 or Turf-Type Tall Fescue	100%
General Slope (3:1 or less)	
- Kentucky 31 Fescue	128 lbs.
- Red Top Grass	2 lbs.
- Seasonal Nurse Crop *	20 lbs.
Low-Maintenance Slope (Steeper than 3:1)	150 lbs.
- Kentucky 31 Fescue	108 lbs.
- Red Top Grass	2 lbs.
- Seasonal Nurse Crop *	20 lbs.
- Crownvetch **	20 lbs.
	150 lbs.

* Use seasonal nurse crop in accordance with seeding dates as stated below:
February 16th through April Annual Rye
May 1st through August 15th Foxtail Millet
August 16th through October Annual Rye
November through February 15th Winter Rye

** Substitute Sericea lespedeza for Crownvetch east of Farmville, Va. (May through September use hulled Sericea, all other periods, use unhulled Sericea). If Flatpea is used in lieu of Crownvetch, increase rate to 30 lbs./acre. All legume seed must be properly inoculated. Weeping Lovegrass may be added to any slope or low-maintenance mix during warmer seeding periods; add 10-20 lbs./acre in mixes.

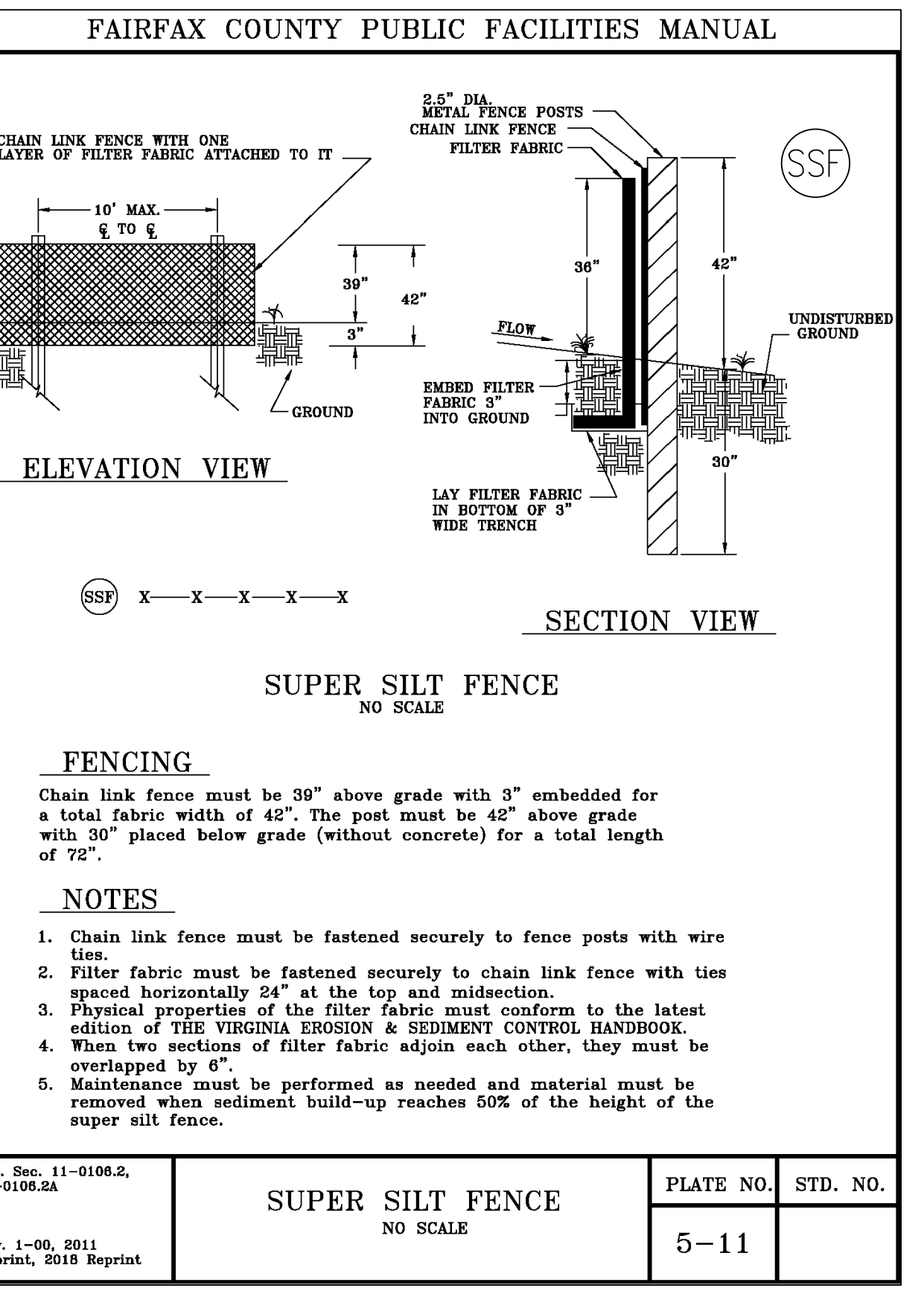
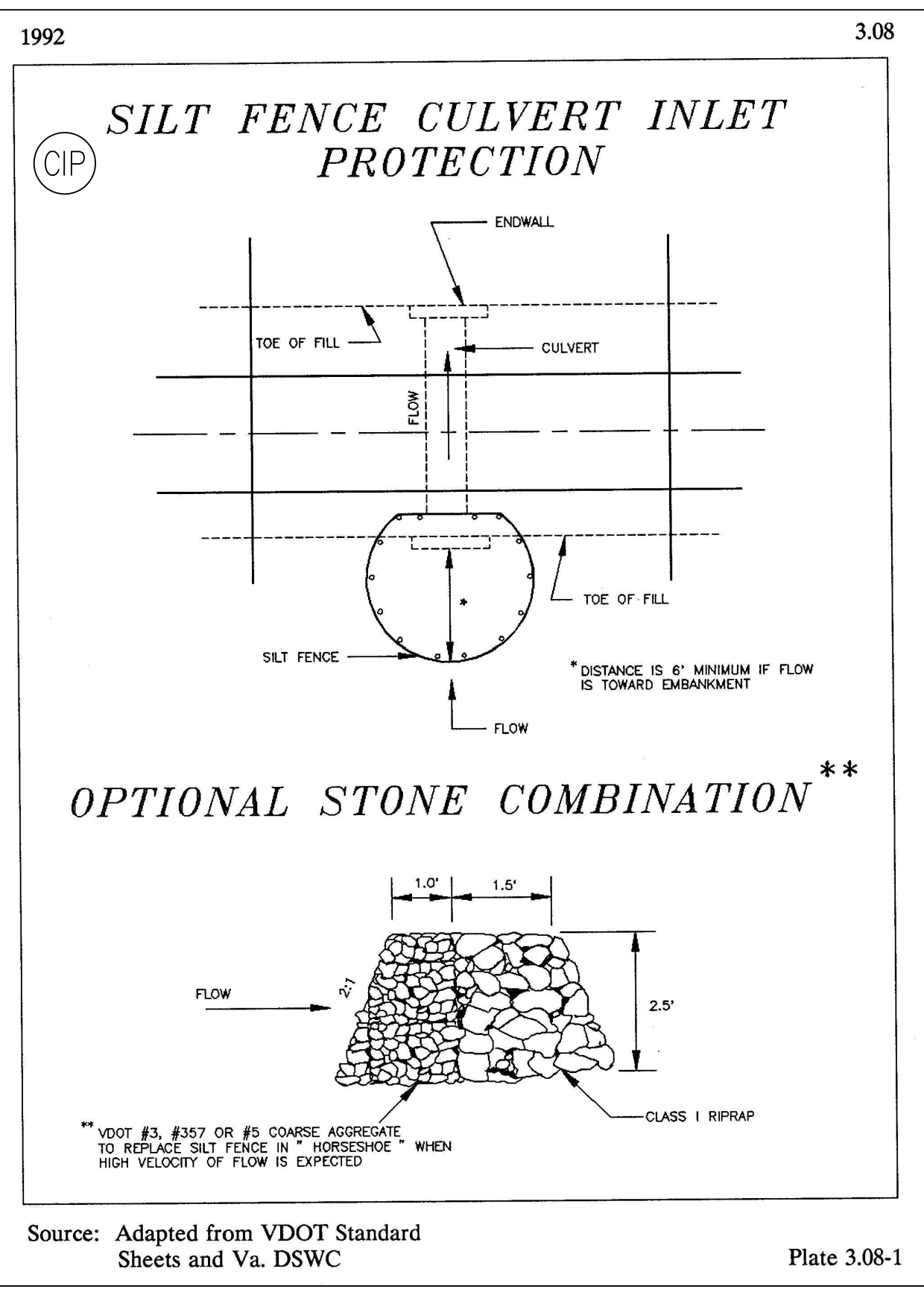
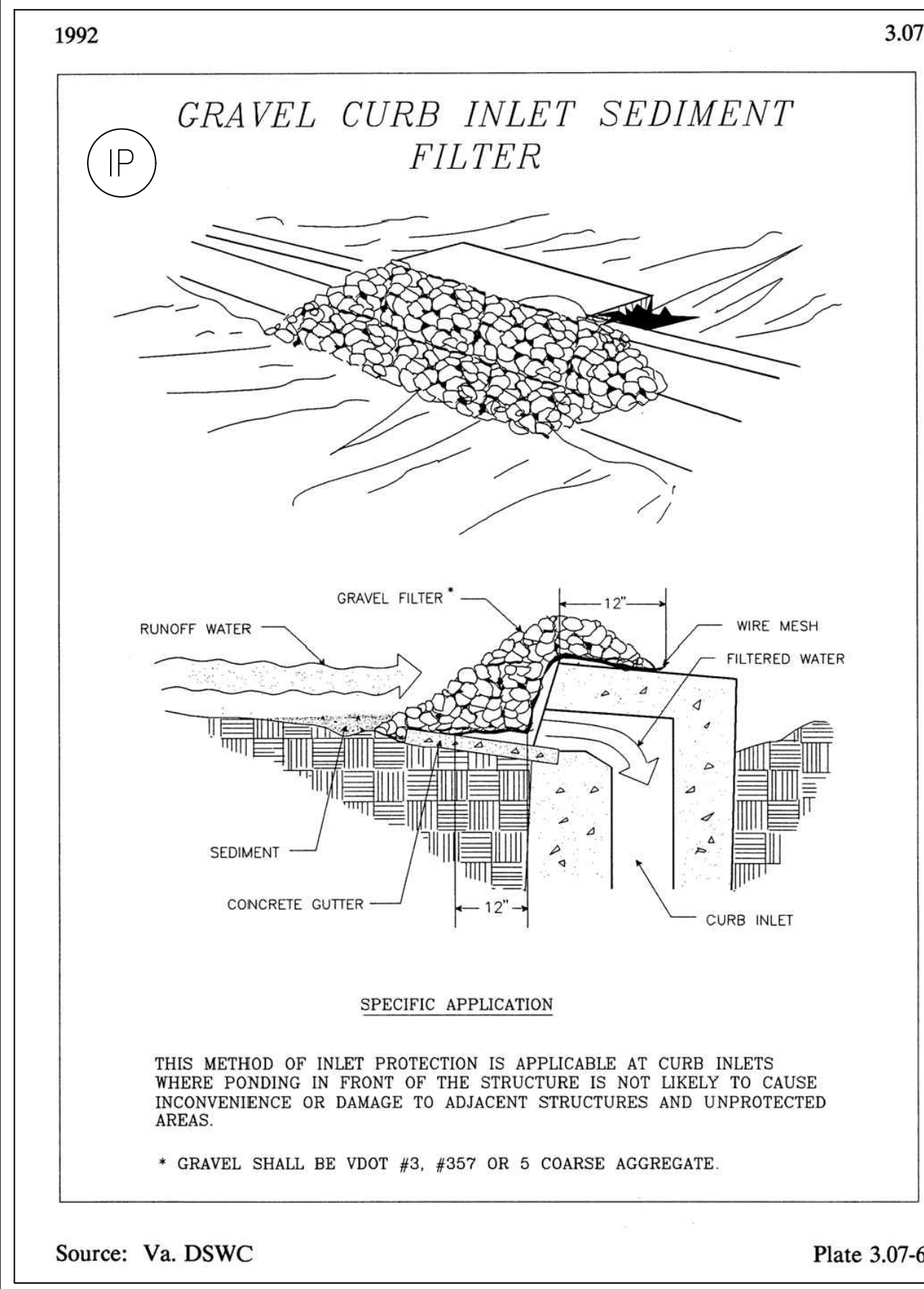


TABLE 3.35-A
ORGANIC MULCH MATERIALS AND APPLICATION RATES

MULCHES:	RATES:		NOTES:
	Per Acre	Per 1000 sq. ft.	
Straw or Hay	1 1/2 - 2 tons (Minimum 2 tons for winter cover)	70 - 90 lbs.	Free from weeds and coarse matter. Must be anchored. Spread with mulch blower or by hand.
Fiber Mulch	Minimum 1500 lbs.	35 lbs.	Do not use as mulch for winter cover or during hot, dry periods.* Apply as slurry.
Corn Stalks	4 - 6 tons	185 - 275 lbs.	Cut or shredded in 4-6" lengths. Air-dried. Do not use in fine turf areas. Apply with mulch blower or by hand.
Wood Chips	4 - 6 tons	185 - 275 lbs.	Free of coarse matter. Air-dried. Treat with 12 lbs. nitrogen per ton. Do not use in fine turf areas. Apply with mulch blower, chip handler, or by hand.
Bark Chips or Shredded Bark	50 - 70 cu. yds.	1-2 cu. yds.	Free of coarse matter. Air-dried. Do not use in fine turf areas. Apply with mulch blower, chip handler, or by hand.

* When fiber mulch is the only available mulch during periods when straw should be used, apply at a minimum rate of 2000 lbs./ac. or 45 lbs./1000 sq. ft.

Source: Va. DSWC

TABLE 3.31-B
ACCEPTABLE TEMPORARY SEEDING PLANT MATERIALS
'QUICK REFERENCE FOR ALL REGIONS'

Planting Dates	Species	Rate (lbs./acre)
Sept. 1 - Feb. 15	50/50 Mix of Annual Ryegrass (Lolium multi-florum) & Cereal (Winter) Rye (Secale cereale)	50 - 100
Feb. 16 - Apr. 30	Annual Ryegrass (Lolium multi-florum)	60 - 100
May 1 - Aug 31	German Millet (Setaria italica)	50

TABLE 3.31-A
LIMING REQUIREMENTS FOR TEMPORARY SITES

pH Test	Recommended Application of Agricultural Limestone
below 4.2	3 tons per acre
4.2 to 5.2	2 tons per acre
5.2 to 6	1 ton per acre

Source: Va. DSWC

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
DRAWN BY: A. NGUYEN
SHEET CHK'D BY: A. YEAGLE
CROSS CHK'D BY: C. AHENEGAR
APPROVED BY: C. HENEGAR
DATE: AUGUST 2024

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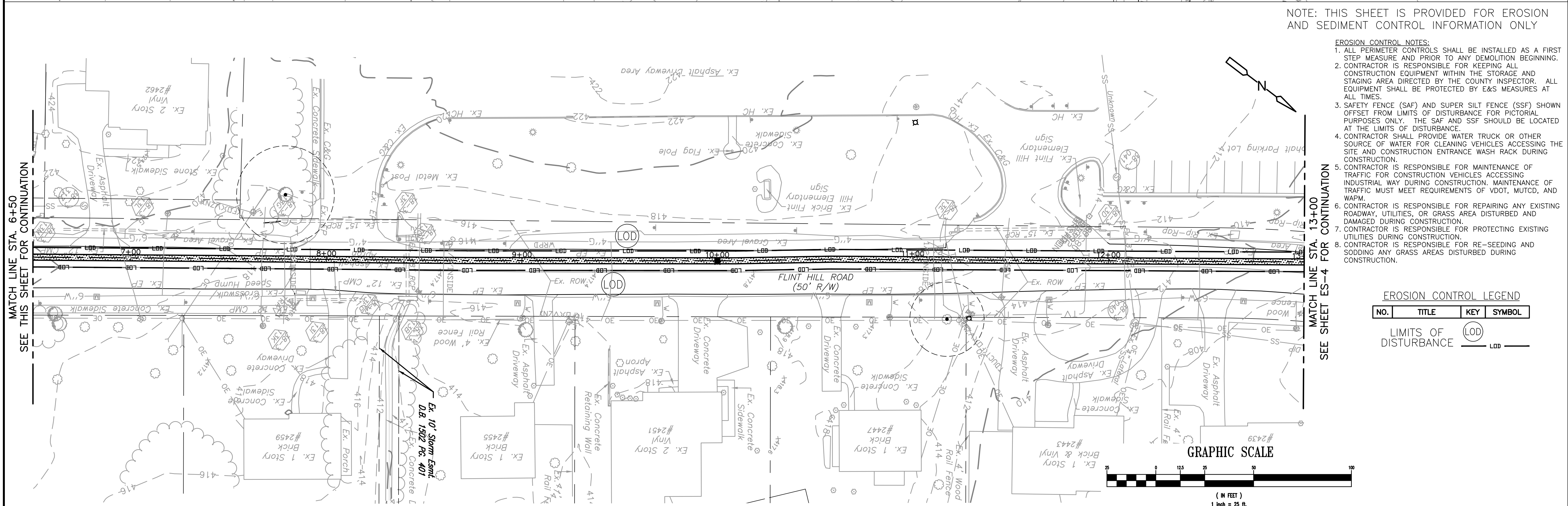
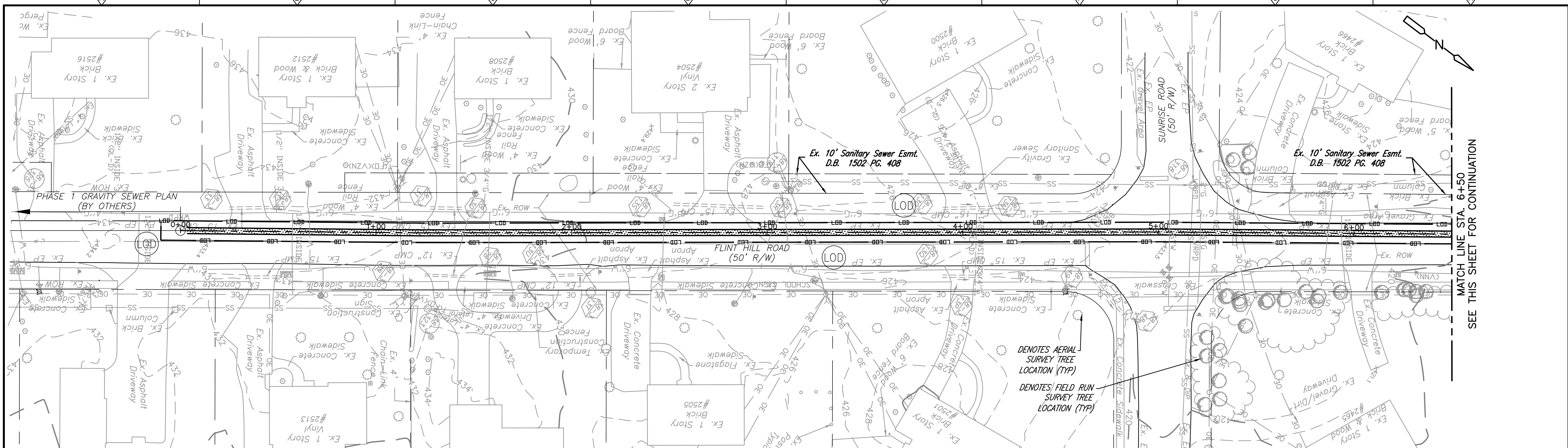
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FAIRFAX COUNTY, VIRGINIA
DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
TYSONS WASTEWATER CONVEYANCE SYSTEM
MODIFICATIONS
PACKAGE 4: FORCE MAIN

EROSION AND SEDIMENT CONTROL
NOTES AND DETAILS

PROJECT NO. 5003-244105
FILE NAME: ES02 ES DETAILS
SHEET NO. ES-2

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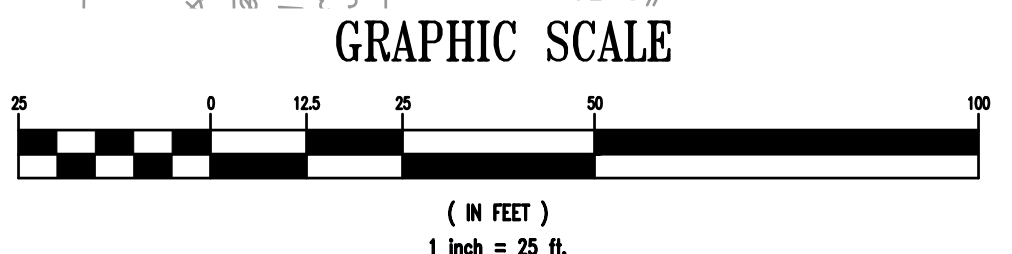


NOTE: THIS SHEET IS PROVIDED FOR EROSION AND SEDIMENT CONTROL INFORMATION ONLY

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 2. CONTRACTOR IS RESPONSIBLE FOR KEEPING ALL CONSTRUCTION EQUIPMENT WITHIN THE STORAGE AND STAGING AREA DIRECTED BY THE COUNTY INSPECTOR. ALL EQUIPMENT SHALL BE PROTECTED BY E&S MEASURES AT ALL TIMES.
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 4. CONTRACTOR SHALL PROVIDE WATER TRUCK OR OTHER SOURCE OF WATER FOR CLEANING VEHICLES ACCESSING THE SITE AND CONSTRUCTION ENTRANCE WASH RACK DURING CONSTRUCTION.
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 8. CONTRACTOR IS RESPONSIBLE FOR RE-SEEDING AND SODDING ANY GRASS AREAS DISTURBED DURING CONSTRUCTION.

EROSION CONTROL LEGEND

NO.	TITLE	KEY	SYMBOL
	LIMITS OF DISTURBANCE	LOD	(LOD)
		LDD	---



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
 SHEET CHK'D BY: A. YEAGLE
 CROSS CHK'D BY: C. HENEGAR
 APPROVED BY: C. HENEGAR
 DATE: AUGUST 2024

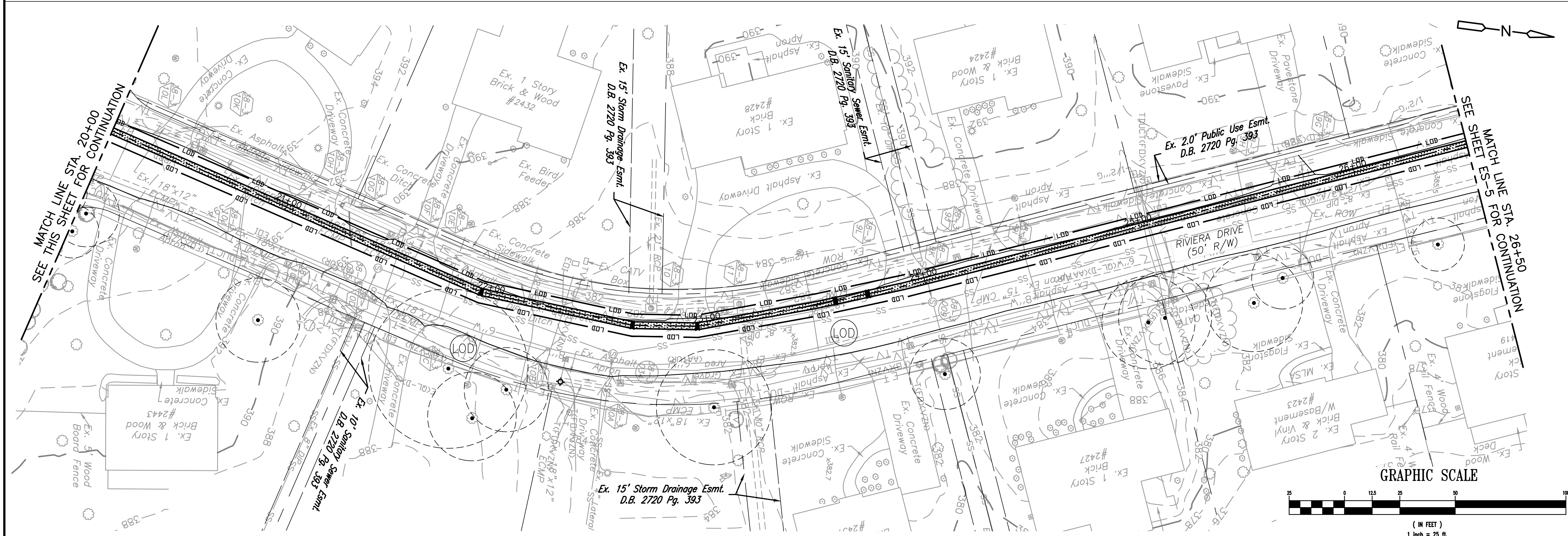
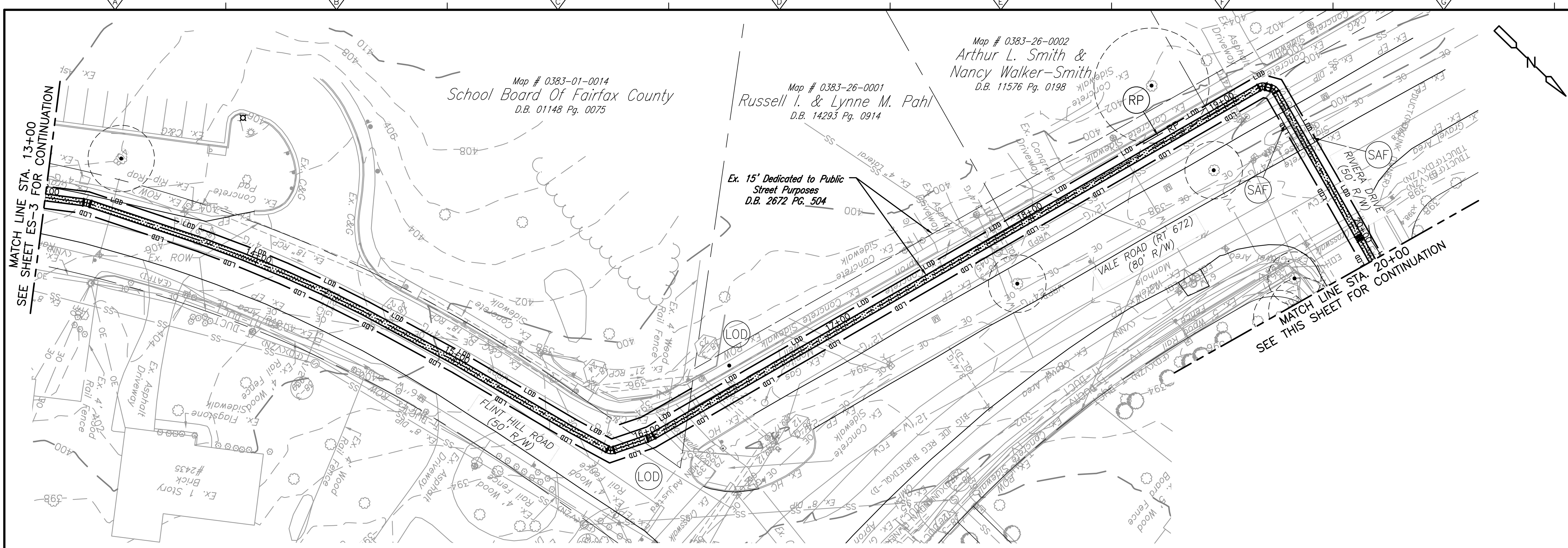
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FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

EROSION AND SEDIMENT CONTROL PLAN
 STA 0+00 TO STA 13+00

PROJECT NO. 5003-244105
FILE NAME: ES03-7 ES PLAN
SHEET NO. ES-3



- EROSION CONTROL NOTES:**
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 8. CONTRACTOR IS RESPONSIBLE FOR RE-SEEDING AND SODDING ANY GRASS AREAS DISTURBED DURING CONSTRUCTION.

EROSION CONTROL LEGEND

NO.	TITLE	KEY	SYMBOL
3.01	SAFETY FENCE	SAF	
	LIMITS OF DISTURBANCE	LOD	

NOTE: THIS SHEET IS PROVIDED FOR EROSION AND SEDIMENT CONTROL INFORMATION ONLY

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
 SHEET CHK'D BY: A. YEAGLE
 CROSS CHK'D BY: C. HENEGAR
 APPROVED BY: C. HENEGAR
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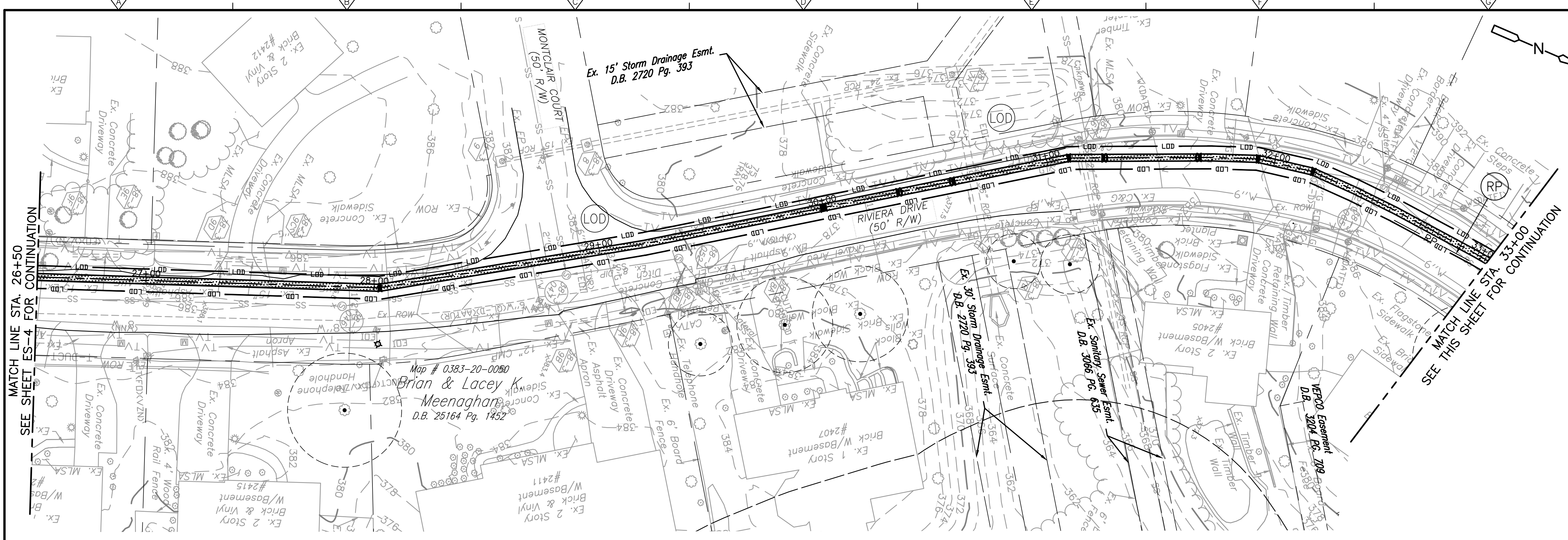
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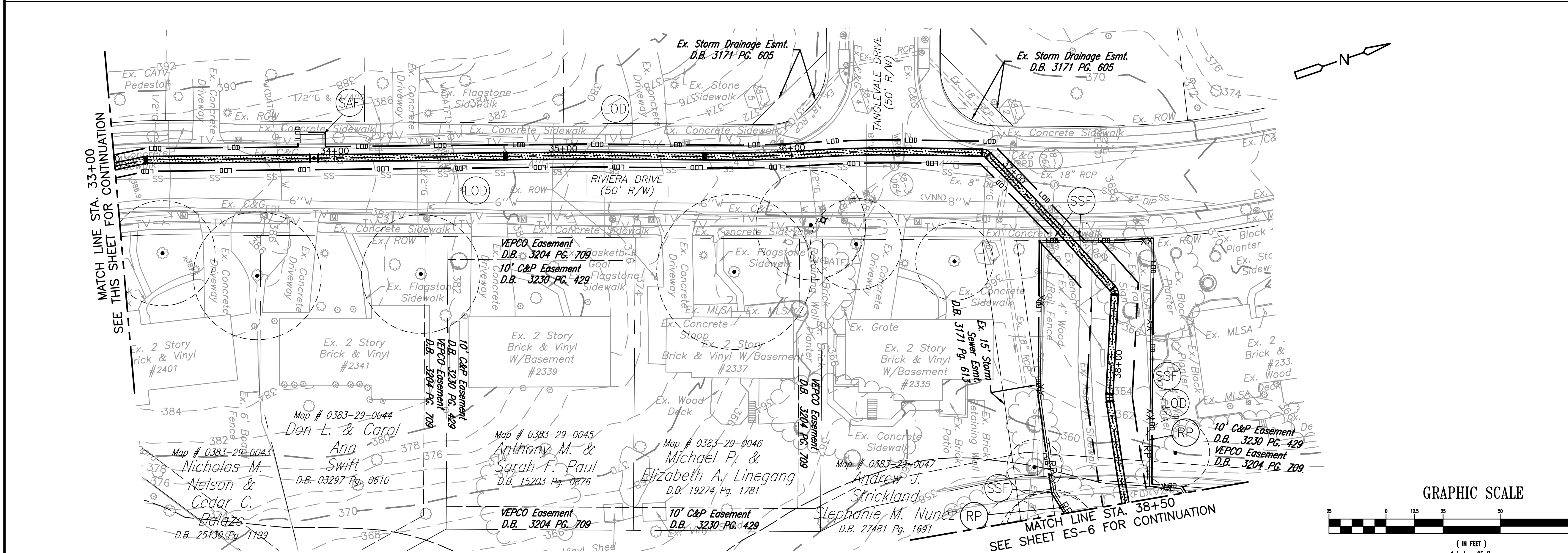
FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

EROSION AND SEDIMENT CONTROL PLAN
 STA 13+00 TO STA 26+50

PROJECT NO. 5003-244105
 FILE NAME: ES03-7 ES PLAN
 SHEET NO. ES-4



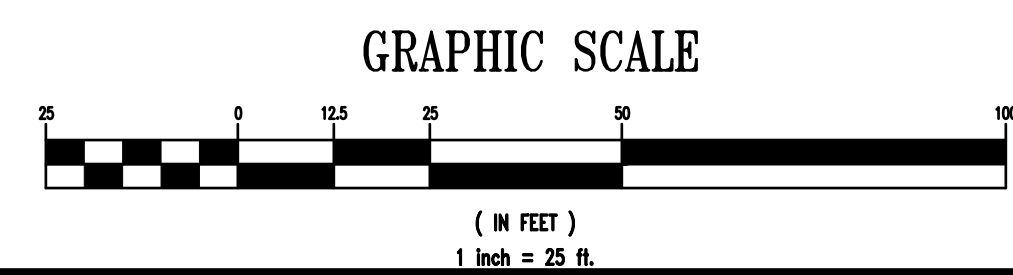
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 8. CONTRACTOR IS RESPONSIBLE FOR RE-SEEDING AND SODDING ANY GRASS AREAS DISTURBED DURING CONSTRUCTION.



EROSION CONTROL LEGEND

NO.	TITLE	KEY	SYMBOL
3.01	SAFETY FENCE	SAF	
	ROOT PRUNING	RP	
	SUPER SILT FENCE	SSF	
	LIMITS OF DISTURBANCE	LOD	

NOTE: THIS SHEET IS PROVIDED FOR EROSION AND SEDIMENT CONTROL INFORMATION ONLY



REV. NO.	DATE	DRWN	CHKD	REMARKS

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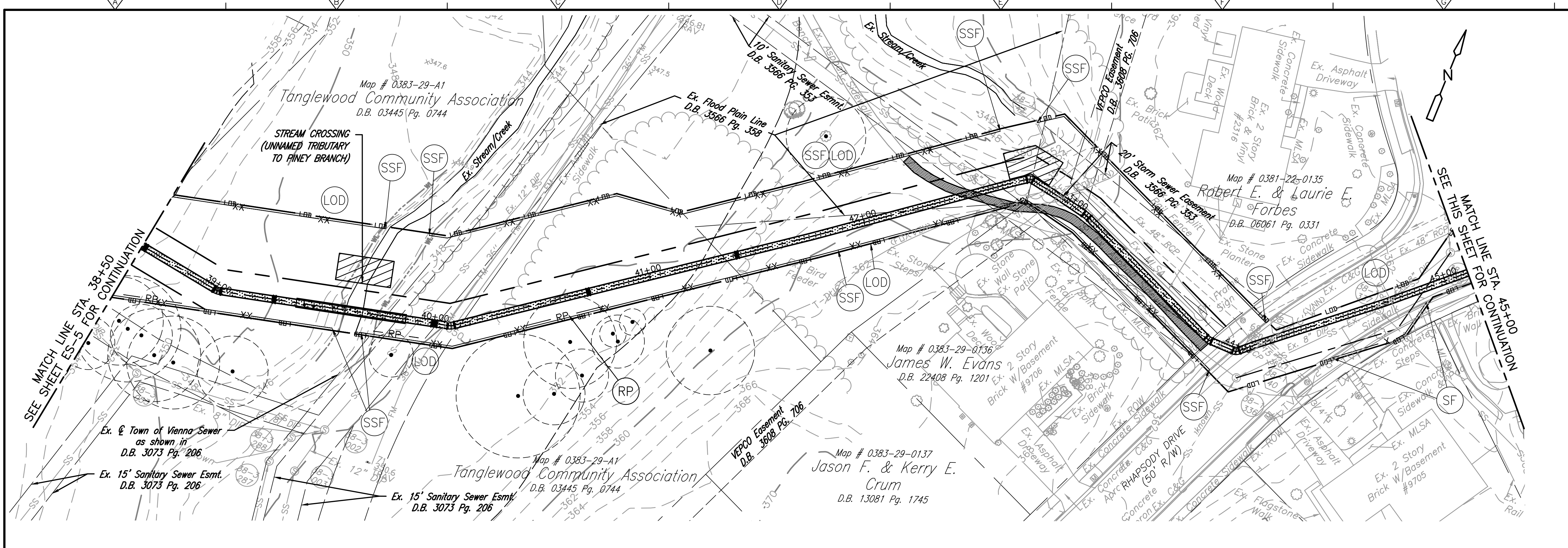
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 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

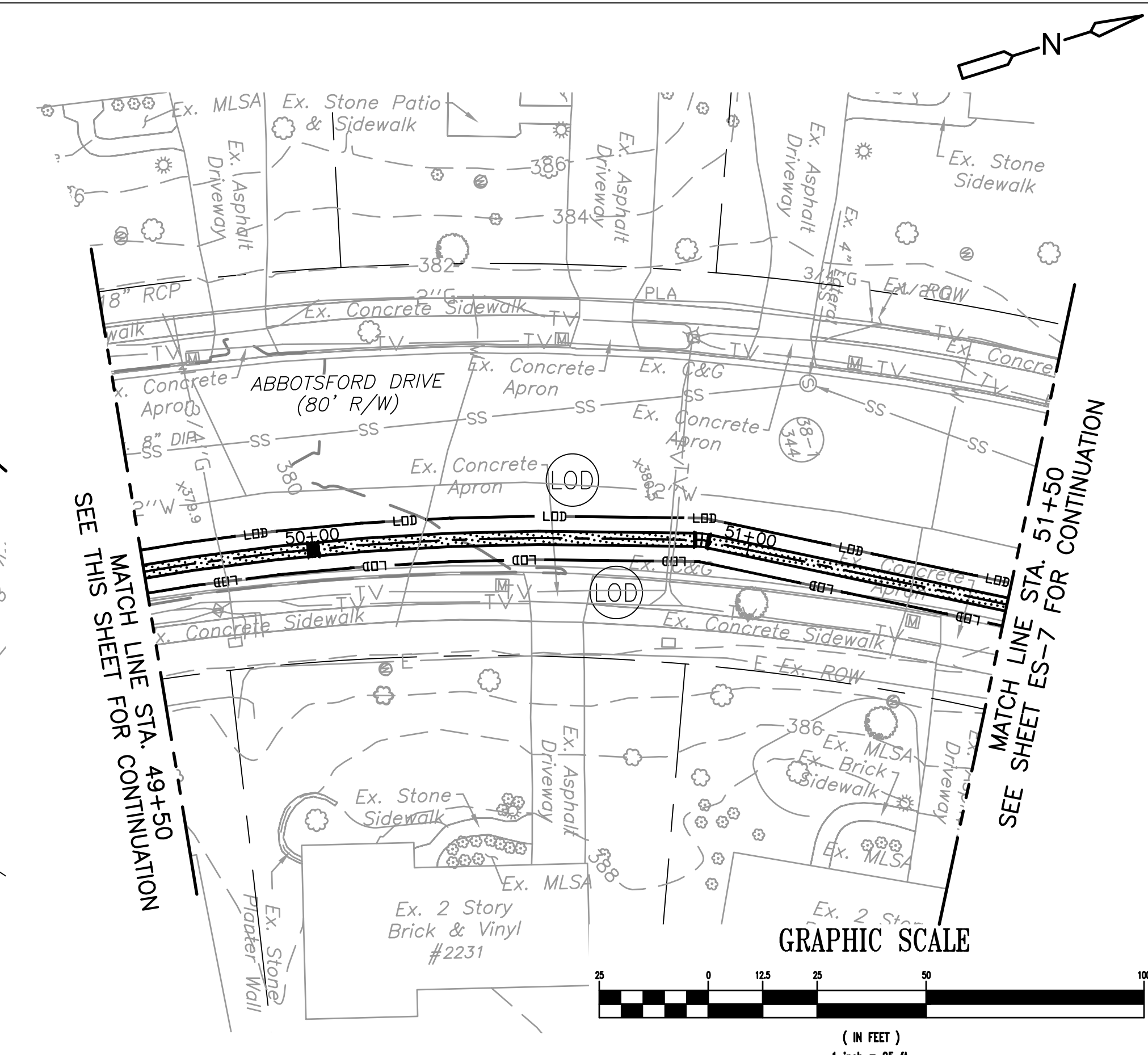
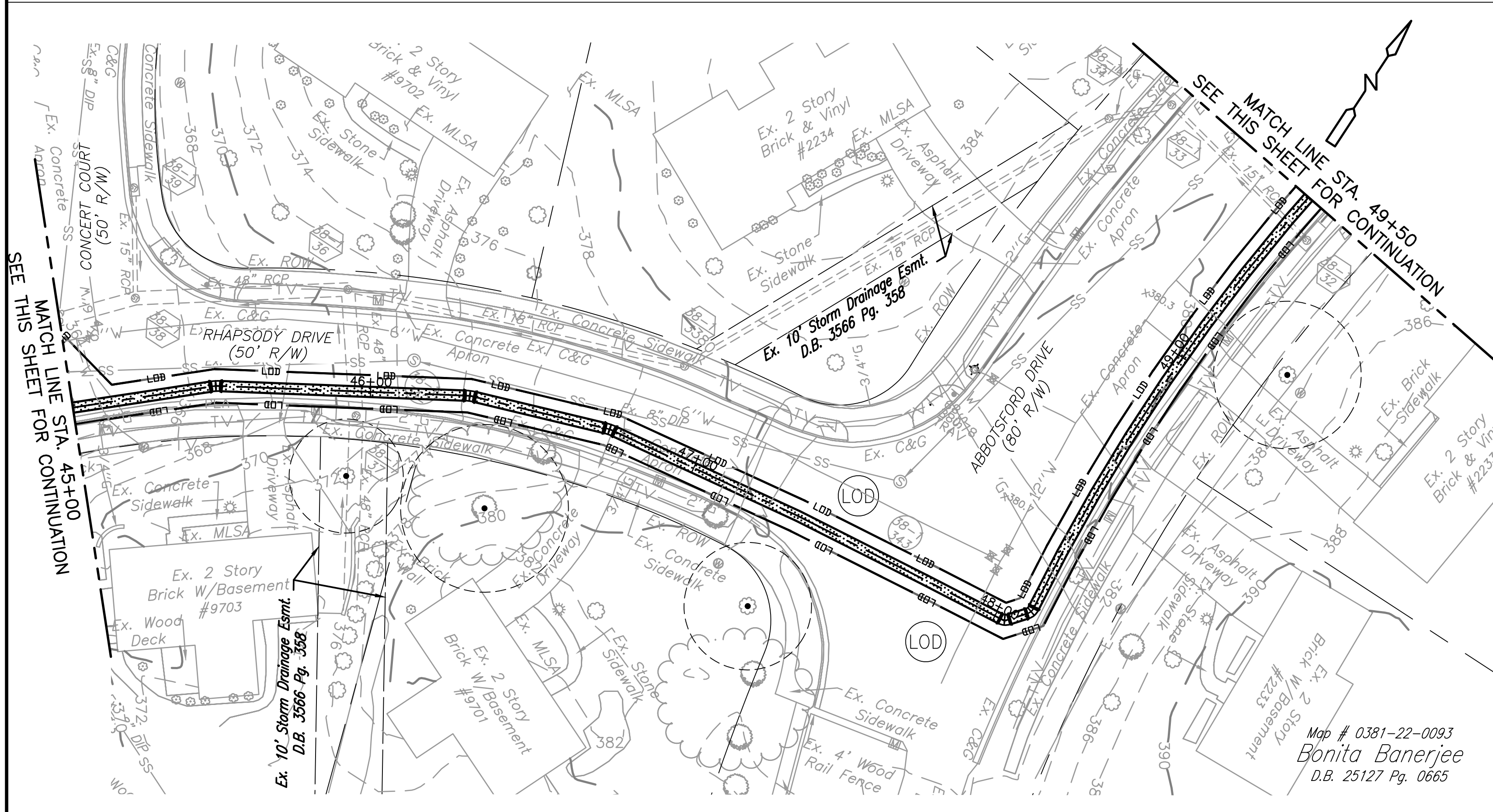
PROJECT NO. 5003-244105
 FILE NAME: ES03-7 ES PLAN
 SHEET NO. **ES-5**

EROSION AND SEDIMENT CONTROL PLAN
 STA 26+50 TO STA 38+50

70% DESIGN SUBMITTAL - NOT FOR CONSTRUCTION



- EROSION CONTROL NOTES:**
1. ALL PERIMETER CONTROLS SHALL BE INSTALLED AS A FIRST STEP MEASURE AND PRIOR TO ANY DEMOLITION BEGINNING.
 2. CONTRACTOR IS RESPONSIBLE FOR KEEPING ALL CONSTRUCTION EQUIPMENT WITHIN THE STORAGE AND STAGING AREA DIRECTED BY THE COUNTY INSPECTOR. ALL EQUIPMENT SHALL BE PROTECTED BY E&S MEASURES AT ALL TIMES.
 3. SAFETY FENCE (SAF) AND SUPER SILT FENCE (SSF) SHOWN OFFSET FROM LIMITS OF DISTURBANCE FOR PICTORIAL PURPOSES ONLY. THE SAF AND SSF SHOULD BE LOCATED AT THE LIMITS OF DISTURBANCE.
 4. CONTRACTOR SHALL PROVIDE WATER TRUCK OR OTHER SOURCE OF WATER FOR CLEANING VEHICLES ACCESSING THE SITE AND CONSTRUCTION ENTRANCE WASH RACK DURING CONSTRUCTION.
 5. CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF TRAFFIC FOR CONSTRUCTION VEHICLES ACCESSING INDUSTRIAL WAY DURING CONSTRUCTION. MAINTENANCE OF TRAFFIC MUST MEET REQUIREMENTS OF VDOT, MUTCD, AND WAPM.
 6. CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY EXISTING ROADWAY, UTILITIES, OR GRASS AREA DISTURBED AND DAMAGED DURING CONSTRUCTION.
 7. CONTRACTOR IS RESPONSIBLE FOR PROTECTING EXISTING UTILITIES DURING CONSTRUCTION.
 8. CONTRACTOR IS RESPONSIBLE FOR RE-SEEDING AND SODDING ANY GRASS AREAS DISTURBED DURING CONSTRUCTION.



EROSION CONTROL LEGEND

NO.	TITLE	KEY	SYMBOL
3.05	SILT FENCE	SSF	-X-X-
	ROOT PRUNING	RP	- RP -
	SUPER SILT FENCE	SSF	XX-XX
	LIMITS OF DISTURBANCE	LOD	LOD

NOTE: THIS SHEET IS PROVIDED FOR EROSION AND SEDIMENT CONTROL INFORMATION ONLY

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
 SHEET CHK'D BY: A. YEAGLE
 CROSS CHK'D BY: C. HENEGAR
 APPROVED BY: C. HENEGAR
 DATE: AUGUST 2024

CDM Smith
 10306 Eaton Place, Suite 500
 Fairfax, VA 22030
 Tel: (703) 691-6500

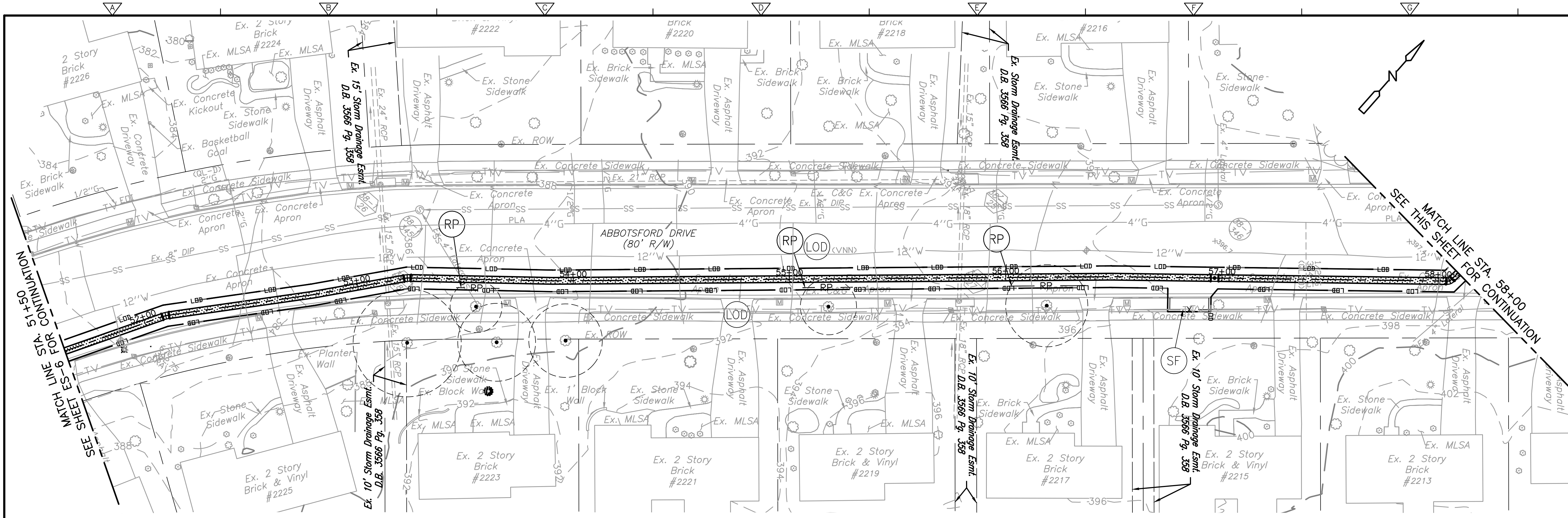
rd
 RINKER DESIGN ASSOC.
 11100 Endeavor Court
 Suite 200
 Manassas, VA 20109

FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

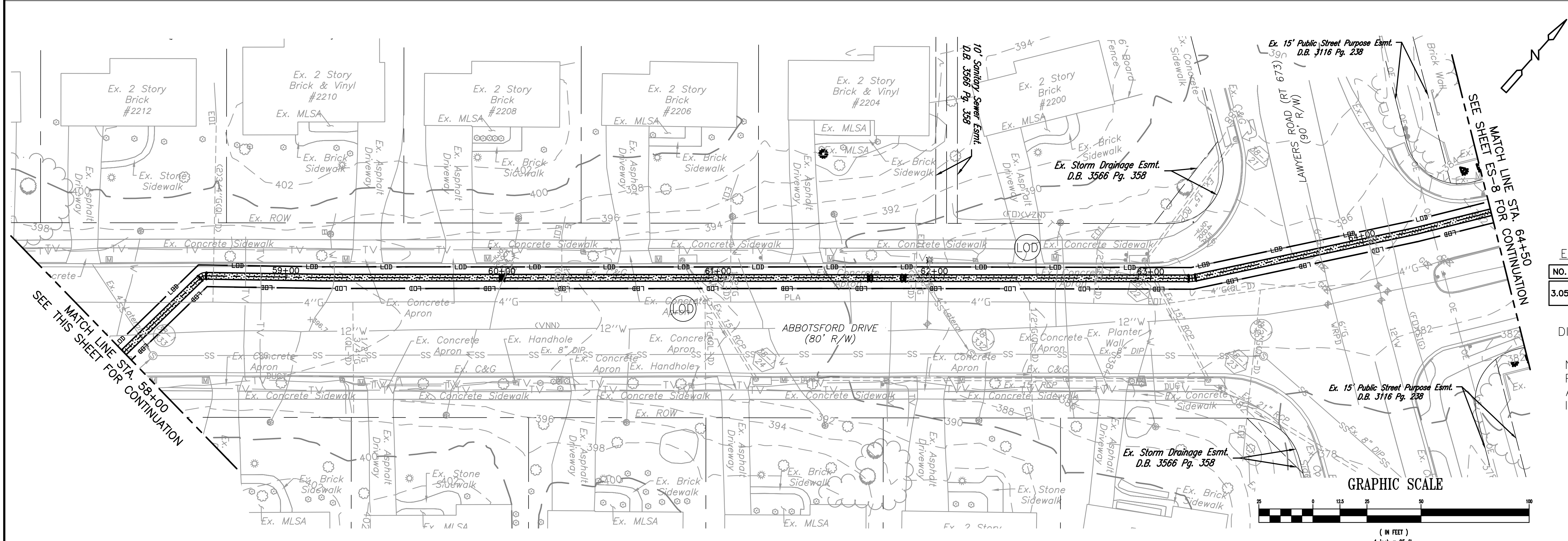
PROJECT NO. 5003-244105
 FILE NAME: ES03-7 ES PLAN
 SHEET NO. **ES-6**

EROSION AND SEDIMENT CONTROL PLAN
 STA 38+50 TO STA 51+50

70% DESIGN SUBMITTAL - NOT FOR CONSTRUCTION



- EROSION CONTROL NOTES:**
1. ALL PERIMETER CONTROLS SHALL BE INSTALLED AS A FIRST STEP MEASURE AND PRIOR TO ANY DEMOLITION BEGINNING.
 2. CONTRACTOR IS RESPONSIBLE FOR KEEPING ALL CONSTRUCTION EQUIPMENT WITHIN THE STORAGE AND STAGING AREA DIRECTED BY THE COUNTY INSPECTOR. ALL EQUIPMENT SHALL BE PROTECTED BY E&S MEASURES AT ALL TIMES.
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 6. CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY EXISTING ROADWAY, UTILITIES, OR GRASS AREA DISTURBED AND DAMAGED DURING CONSTRUCTION.
 7. CONTRACTOR IS RESPONSIBLE FOR PROTECTING EXISTING UTILITIES DURING CONSTRUCTION.
 8. CONTRACTOR IS RESPONSIBLE FOR RE-SEEDING AND SODDING ANY GRASS AREAS DISTURBED DURING CONSTRUCTION.



EROSION CONTROL LEGEND

NO.	TITLE	KEY	SYMBOL
3.05	SILT FENCE	SF	-X-X-
	LIMITS OF DISTURBANCE	LOD	— LOD —

NOTE: THIS SHEET IS PROVIDED FOR EROSION AND SEDIMENT CONTROL INFORMATION ONLY

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
 SHEET CHK'D BY: A. YEAGLE
 CROSS CHK'D BY: C. HENEGAR
 APPROVED BY: C. HENEGAR
 DATE: AUGUST 2024

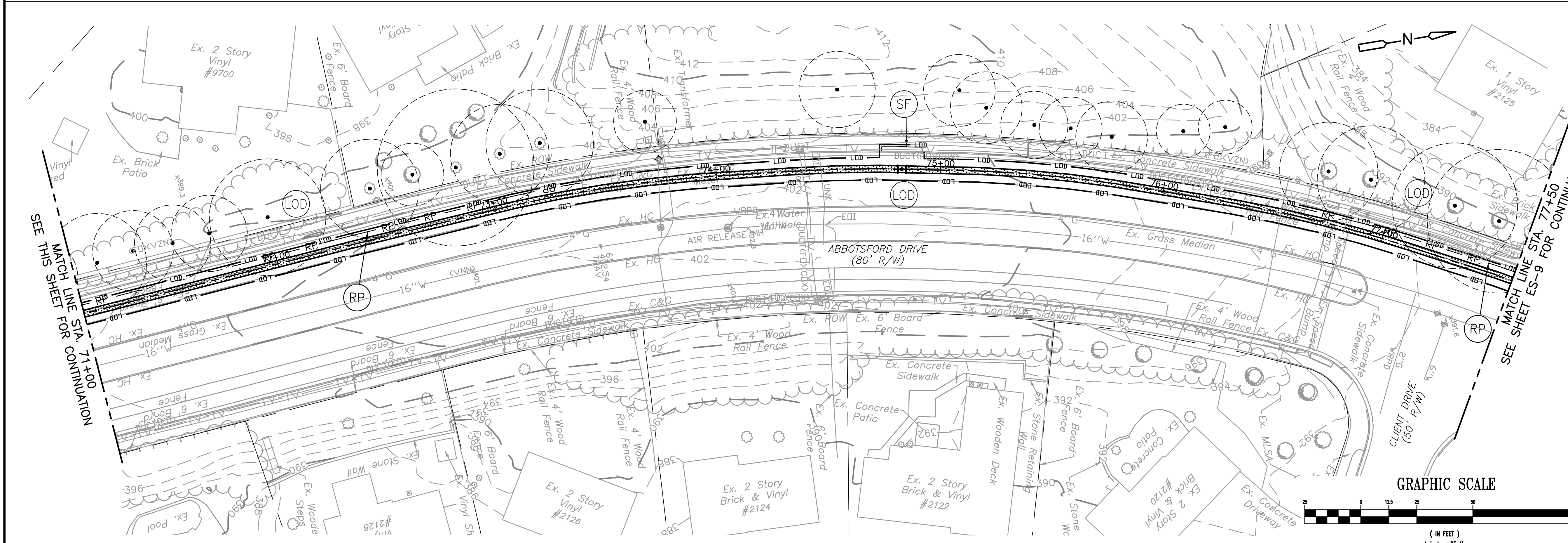
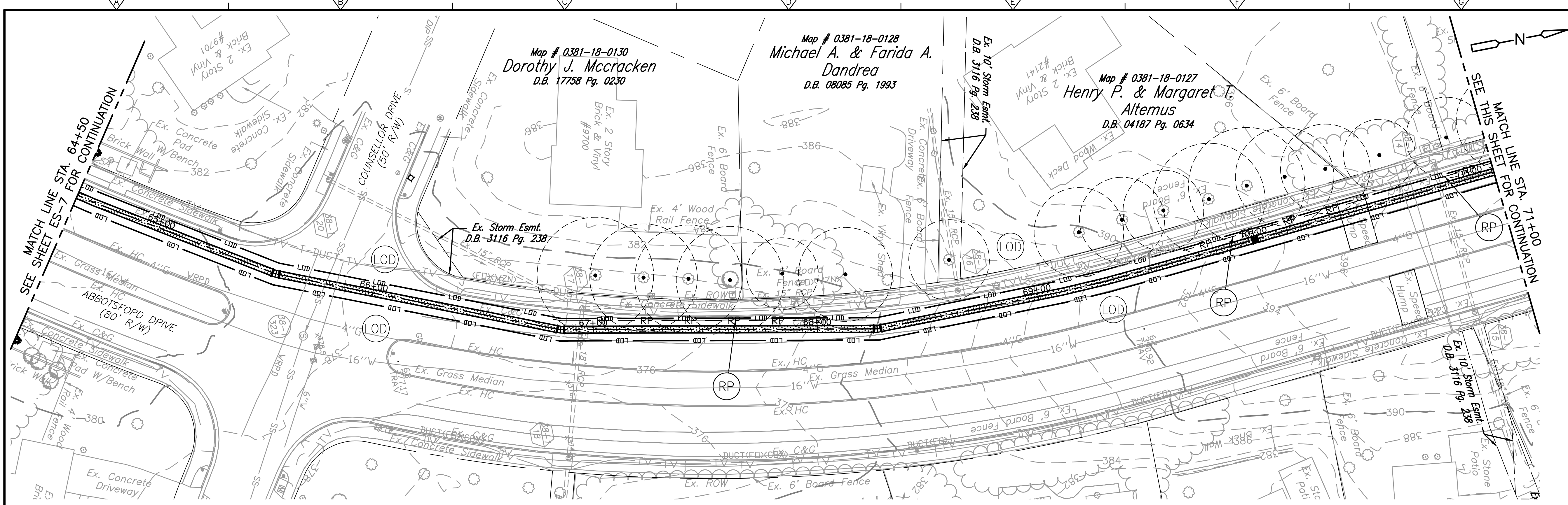
CDM Smith
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 RINKER DESIGN ASSOC.
 1110 Endeavor Court
 Suite 200
 Manassas, VA 20109

FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

EROSION AND SEDIMENT CONTROL PLAN
 STA 51+50 TO STA 64+50

PROJECT NO. 5003-244105
 FILE NAME: ES03-7 ES PLAN
 SHEET NO. ES-7

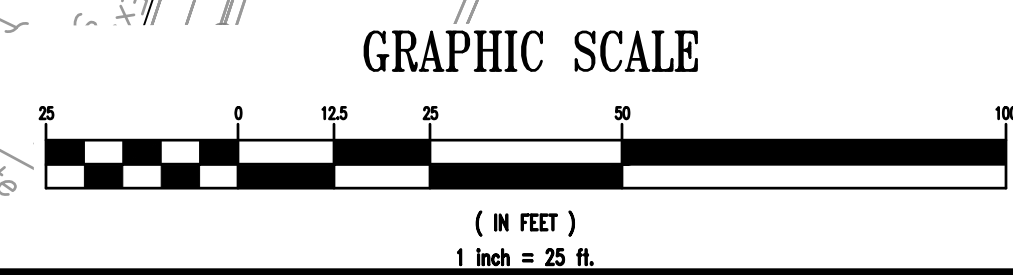


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 8. CONTRACTOR IS RESPONSIBLE FOR RE-SEEDING AND SODDING ANY GRASS AREAS DISTURBED DURING CONSTRUCTION.

EROSION CONTROL LEGEND

NO.	TITLE	KEY	SYMBOL
3.05	SILT FENCE	SF	-X-X-
	LIMITS OF DISTURBANCE	LOD	— LOD —

NOTE: THIS SHEET IS PROVIDED FOR EROSION AND SEDIMENT CONTROL INFORMATION ONLY



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
 SHEET CHK'D BY: A. YEAGLE
 CROSS CHK'D BY: C. HENEGAR
 APPROVED BY: C. HENEGAR
 DATE: AUGUST 2024

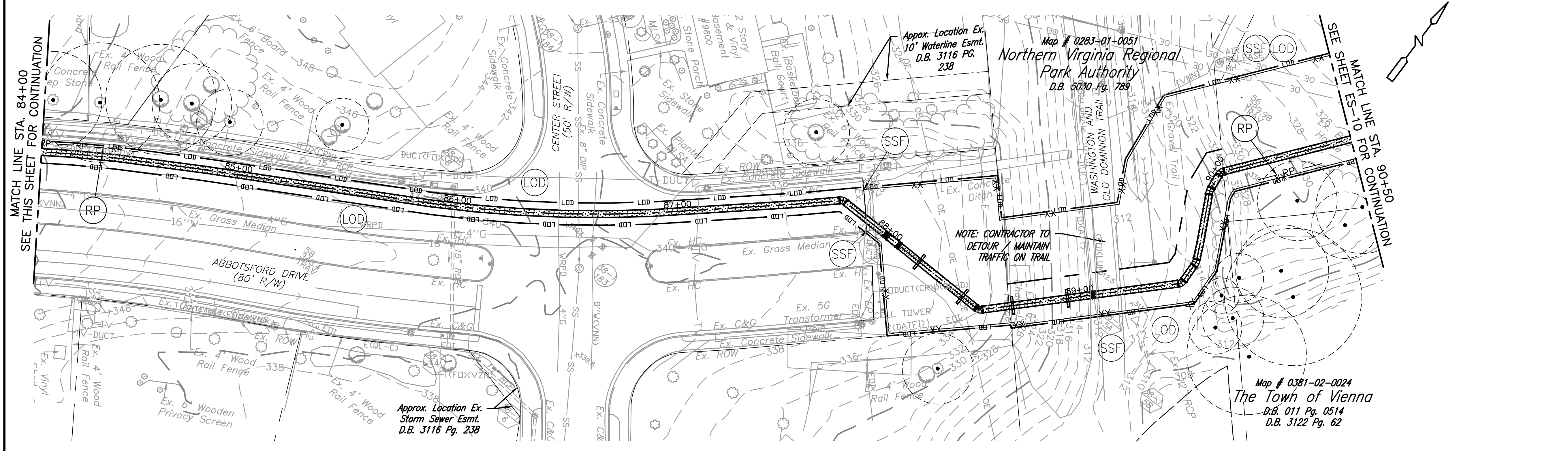
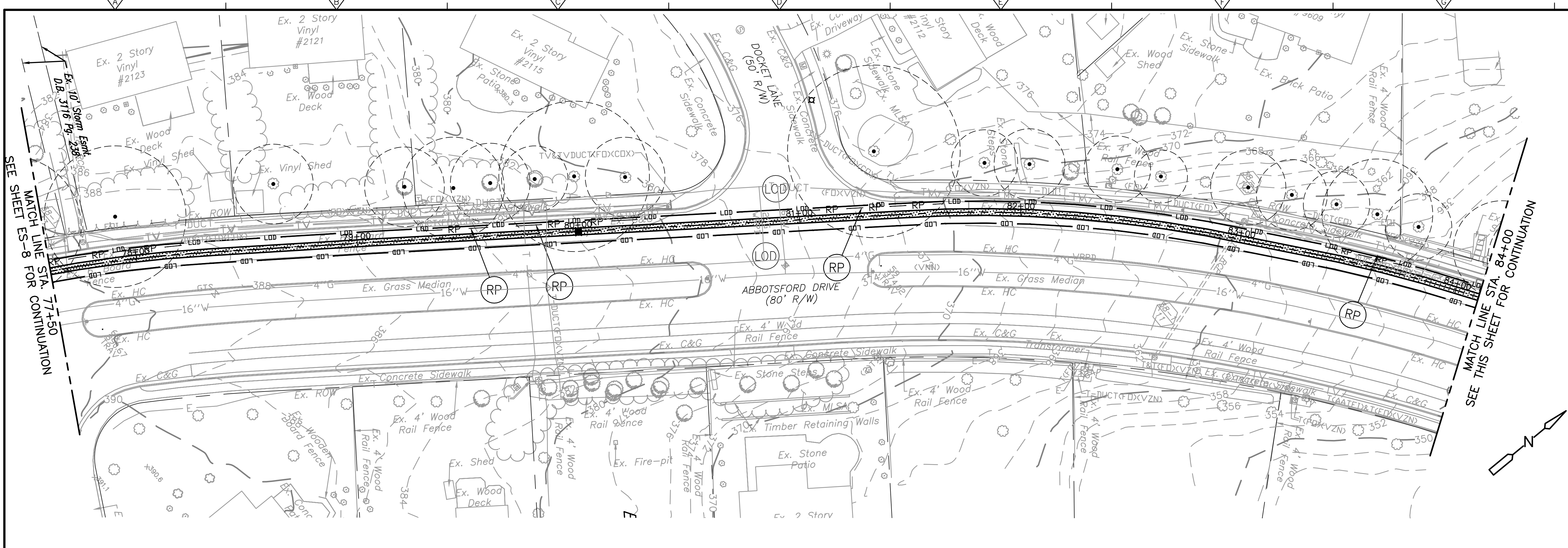
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 Suite 200
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FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

EROSION AND SEDIMENT CONTROL PLAN
 STA 64+50 TO STA 77+50

PROJECT NO. 5003-244105
 FILE NAME: ES08-12 ES PLAN
 SHEET NO. ES-8

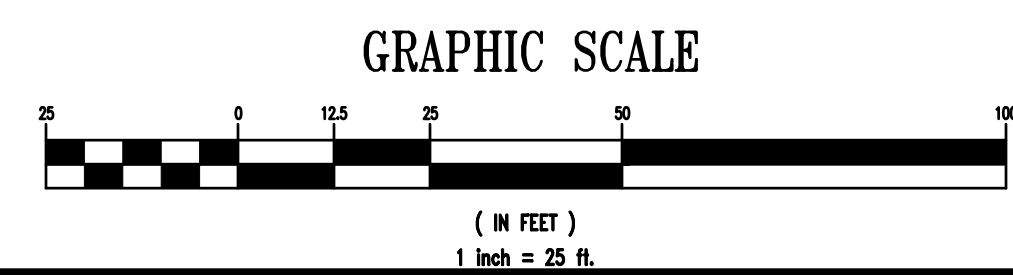


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 8. CONTRACTOR IS RESPONSIBLE FOR RE-SEEDING AND SODDING ANY GRASS AREAS DISTURBED DURING CONSTRUCTION.

EROSION CONTROL LEGEND

NO.	TITLE	KEY	SYMBOL
	ROOT PRUNING	RP	- RP -
	SUPER SILT FENCE	SSF	XX-XX
	LIMITS OF DISTURBANCE	LOD	LOD

NOTE: THIS SHEET IS PROVIDED FOR EROSION AND SEDIMENT CONTROL INFORMATION ONLY



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
 SHEET CHK'D BY: A. YEAGLE
 CROSS CHK'D BY: C. HENEGAR
 APPROVED BY: C. HENEGAR
 DATE: AUGUST 2024

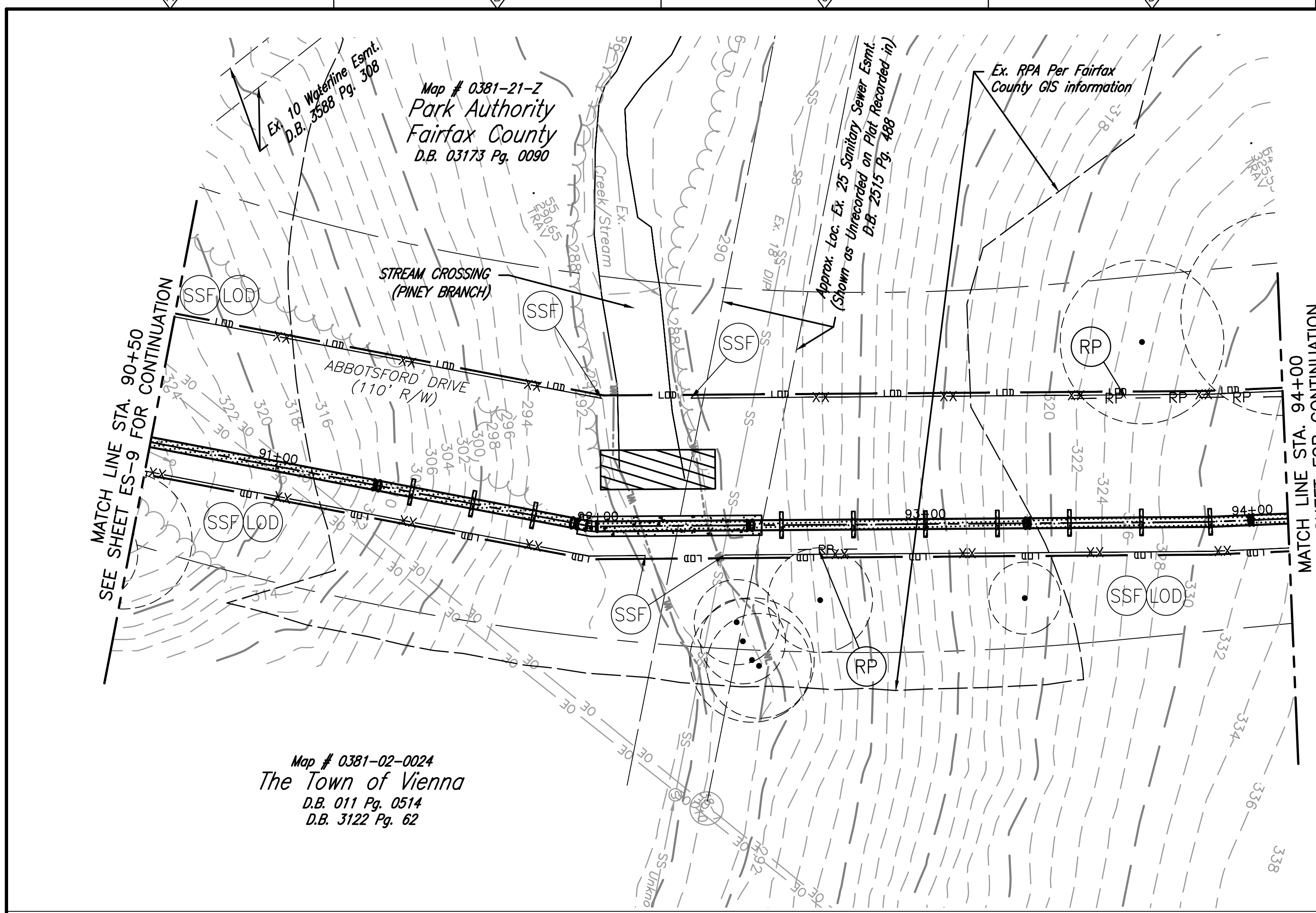
CDM Smith
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 Suite 200
 Manassas, VA 20109

FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

EROSION AND SEDIMENT CONTROL PLAN
 STA 77+50 TO STA 90+50

PROJECT NO. 5003-244105
 FILE NAME: ES08-12 ES PLAN
 SHEET NO. **ES-9**

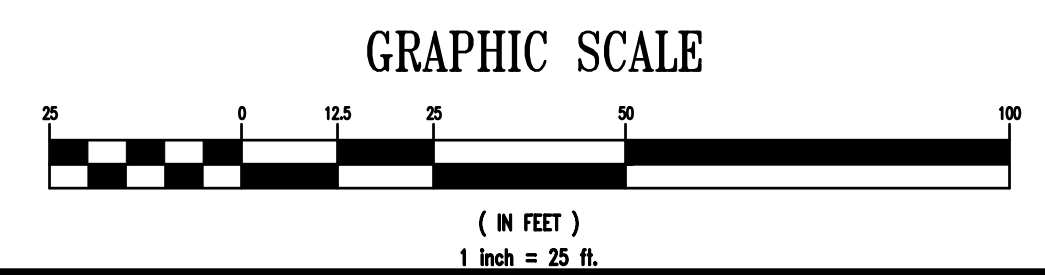
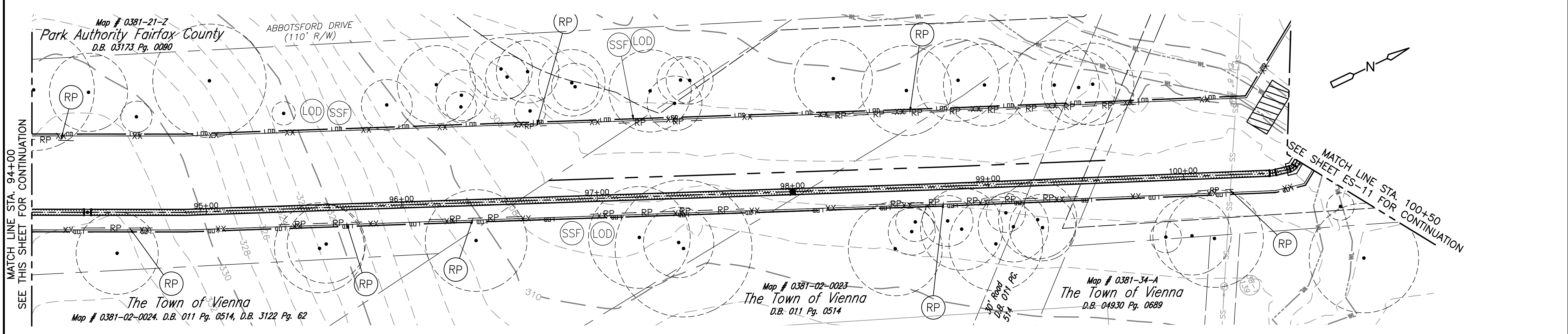


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 8. CONTRACTOR IS RESPONSIBLE FOR RE-SEEDING AND SODDING ANY GRASS AREAS DISTURBED DURING CONSTRUCTION.

EROSION CONTROL LEGEND

NO.	TITLE	KEY	SYMBOL
	ROOT PRUNING	RP	— RP —
	SUPER SILT FENCE	SSF	XX-XX
	LIMITS OF DISTURBANCE	LOD	○ LOD

NOTE: THIS SHEET IS PROVIDED FOR EROSION AND SEDIMENT CONTROL INFORMATION ONLY



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
 SHEET CHK'D BY: A. YEAGLE
 CROSS CHK'D BY: C. HENEGAR
 APPROVED BY: C. HENEGAR
 DATE: AUGUST 2024

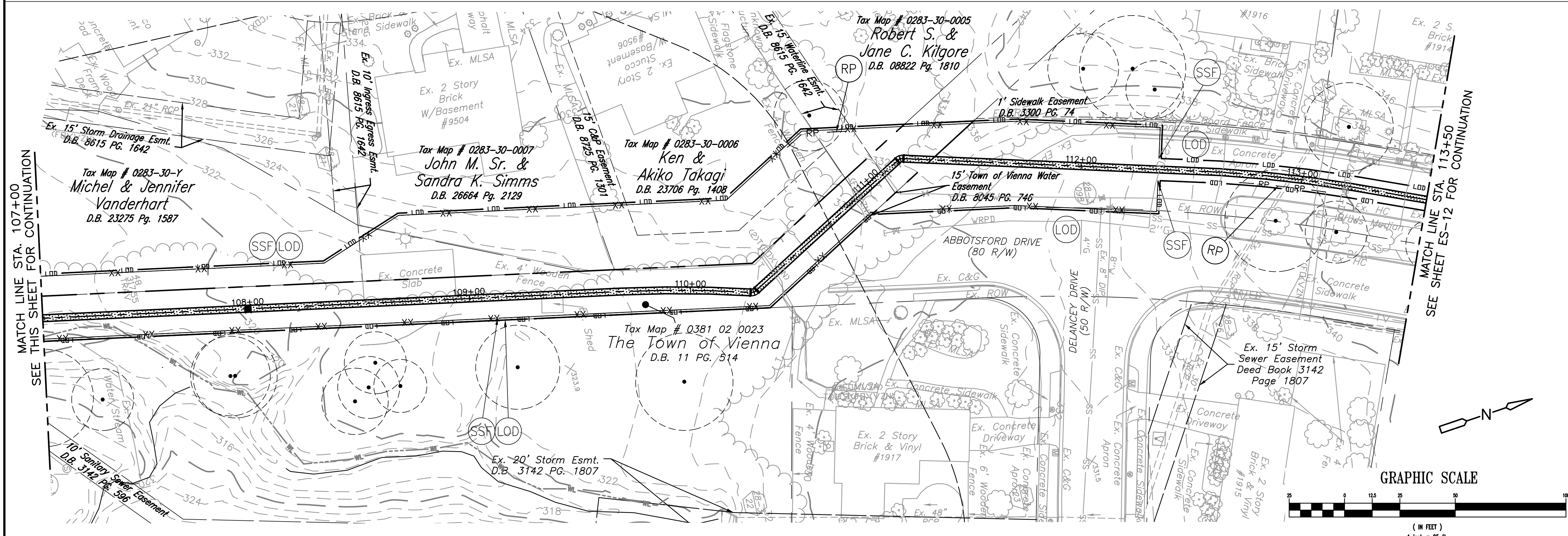
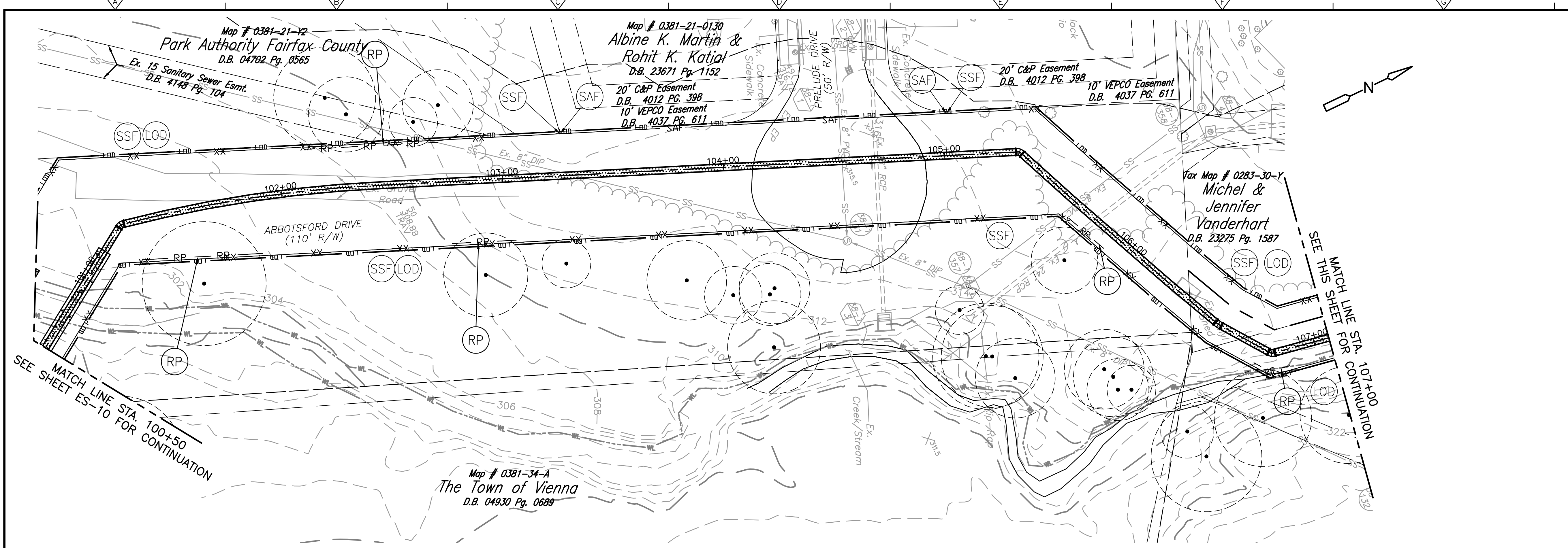
CDM Smith
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FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

EROSION AND SEDIMENT CONTROL PLAN
 STA 90+50 TO STA 100+50

PROJECT NO. 5003-244105
 FILE NAME: ES08-12 ES PLAN
 SHEET NO. ES-10

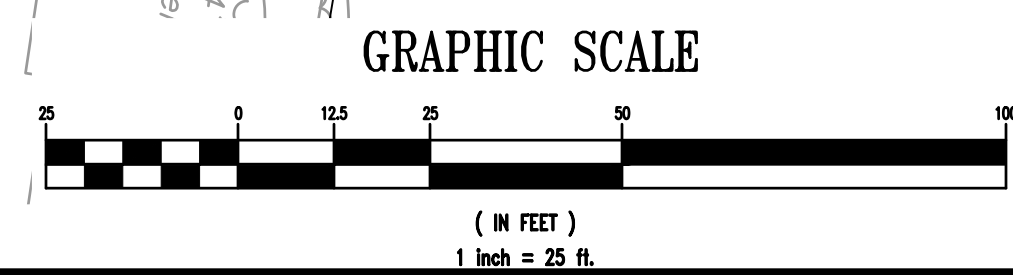


- EROSION CONTROL NOTES:**
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 7. CONTRACTOR IS RESPONSIBLE FOR PROTECTING EXISTING UTILITIES DURING CONSTRUCTION.
 8. CONTRACTOR IS RESPONSIBLE FOR RE-SEEDING AND SODDING ANY GRASS AREAS DISTURBED DURING CONSTRUCTION.

EROSION CONTROL LEGEND

NO.	TITLE	KEY	SYMBOL
3.01	SAFETY FENCE	SAF	
	ROOT PRUNING	RP	
	SUPER SILT FENCE	SSF	
	LIMITS OF DISTURBANCE	LOD	

NOTE: THIS SHEET IS PROVIDED FOR EROSION AND SEDIMENT CONTROL INFORMATION ONLY



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
 SHEET CHK'D BY: A. YEAGLE
 CROSS CHK'D BY: C. HENEGAR
 APPROVED BY: C. HENEGAR
 DATE: AUGUST 2024

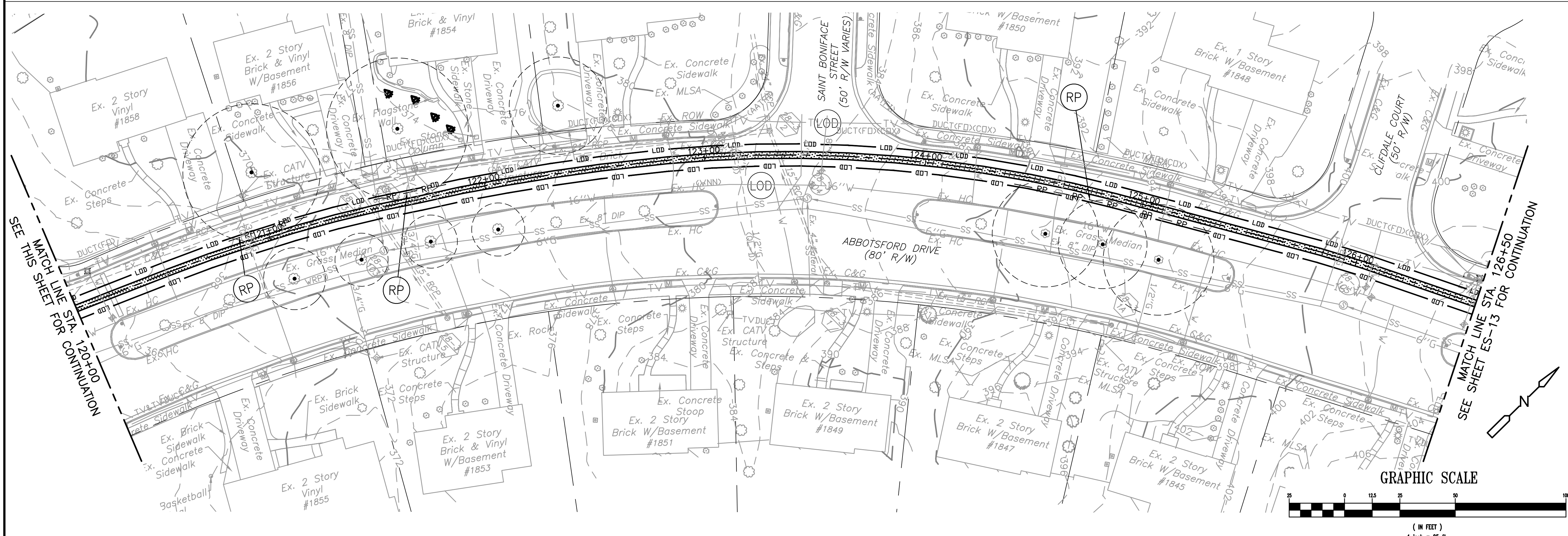
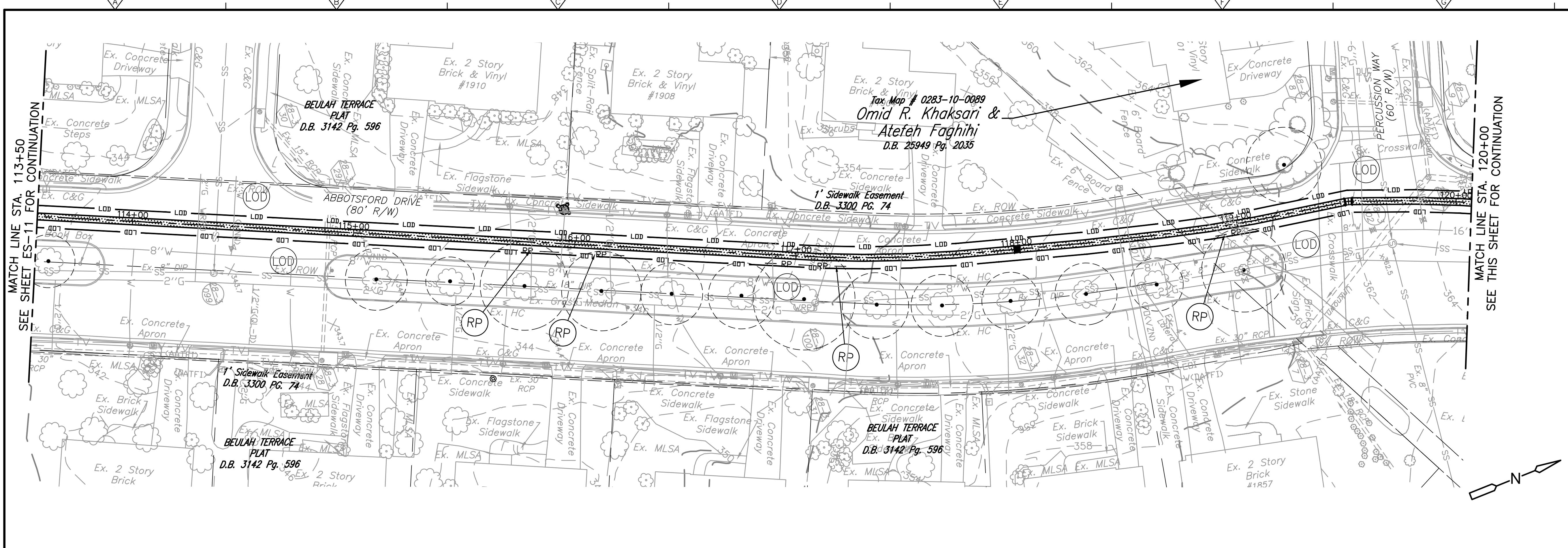
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FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

EROSION AND SEDIMENT CONTROL PLAN
 STA 100+50 TO STA 113+50

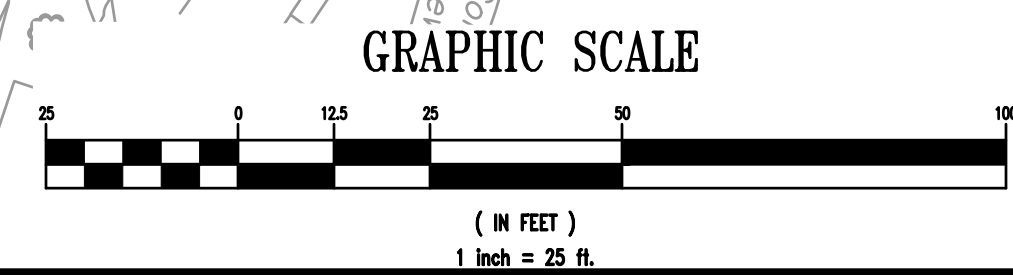
PROJECT NO. 5003-244105
 FILE NAME: ES08-12 ES PLAN
 SHEET NO. ES-11



- EROSION CONTROL NOTES:**
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 8. CONTRACTOR IS RESPONSIBLE FOR RE-SEEDING AND SODDING ANY GRASS AREAS DISTURBED DURING CONSTRUCTION.

LIMITS OF DISTURBANCE (LOD)

NOTE: THIS SHEET IS PROVIDED FOR EROSION AND SEDIMENT CONTROL INFORMATION ONLY



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
 SHEET CHK'D BY: A. YEAGLE
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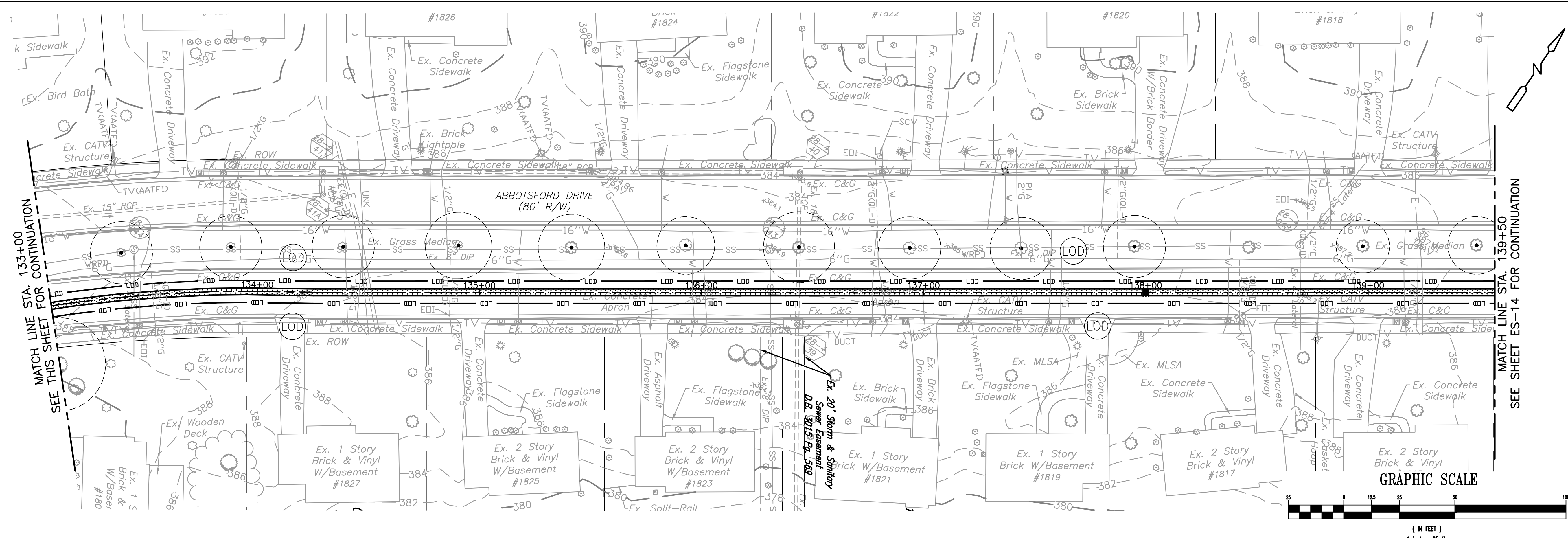
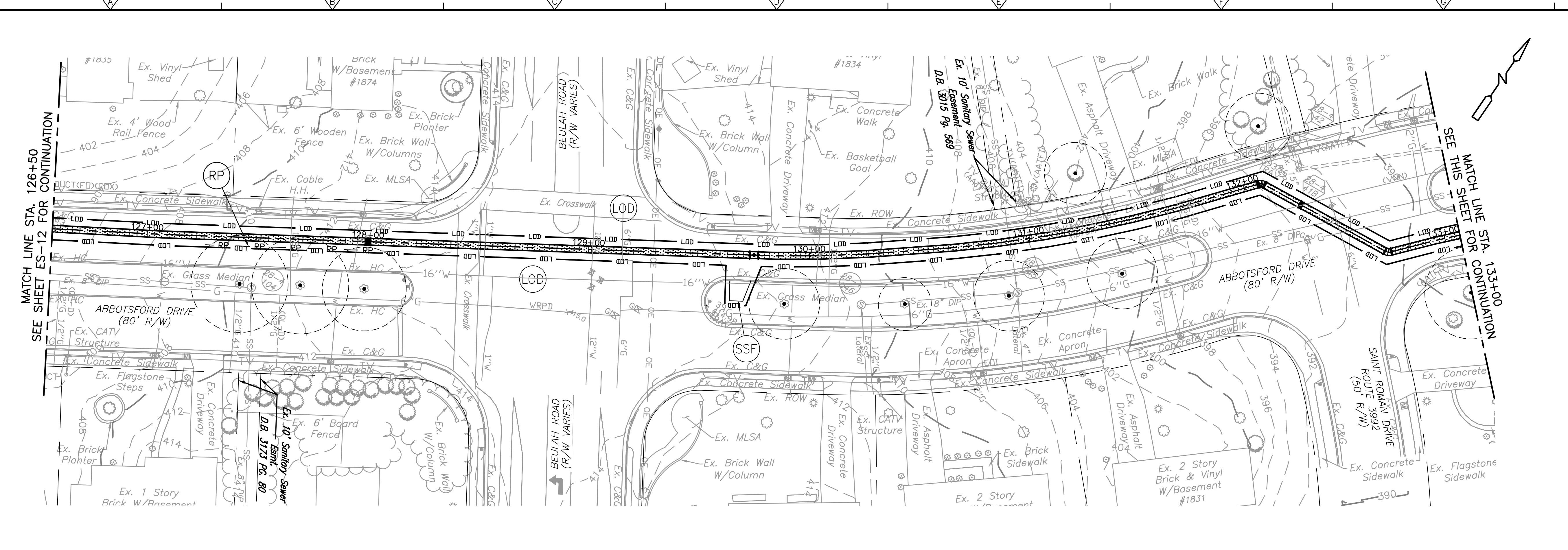
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FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

EROSION AND SEDIMENT CONTROL PLAN
 STA 113+50 TO STA 126+50

PROJECT NO. 5003-244105
 FILE NAME: ES08-12 ES PLAN
 SHEET NO. ES-12

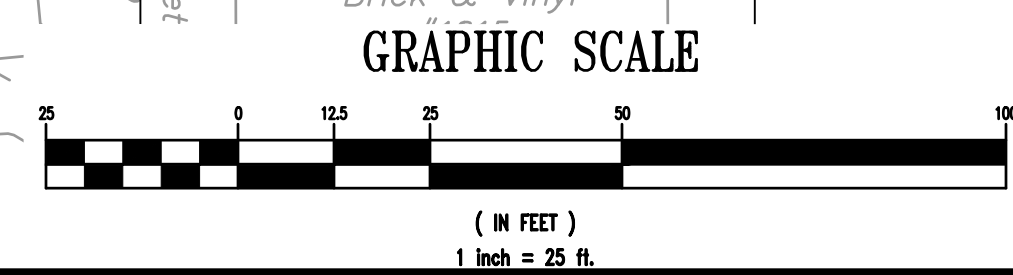


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EROSION CONTROL LEGEND

NO.	TITLE	KEY	SYMBOL
	SUPER SILT FENCE	SSF	XX-XX
	LIMITS OF DISTURBANCE	LOD	LOD

NOTE: THIS SHEET IS PROVIDED FOR EROSION AND SEDIMENT CONTROL INFORMATION ONLY



REV. NO.	DATE	DRWN	CHKD	REMARKS

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 DRAWN BY: A. NGUYEN
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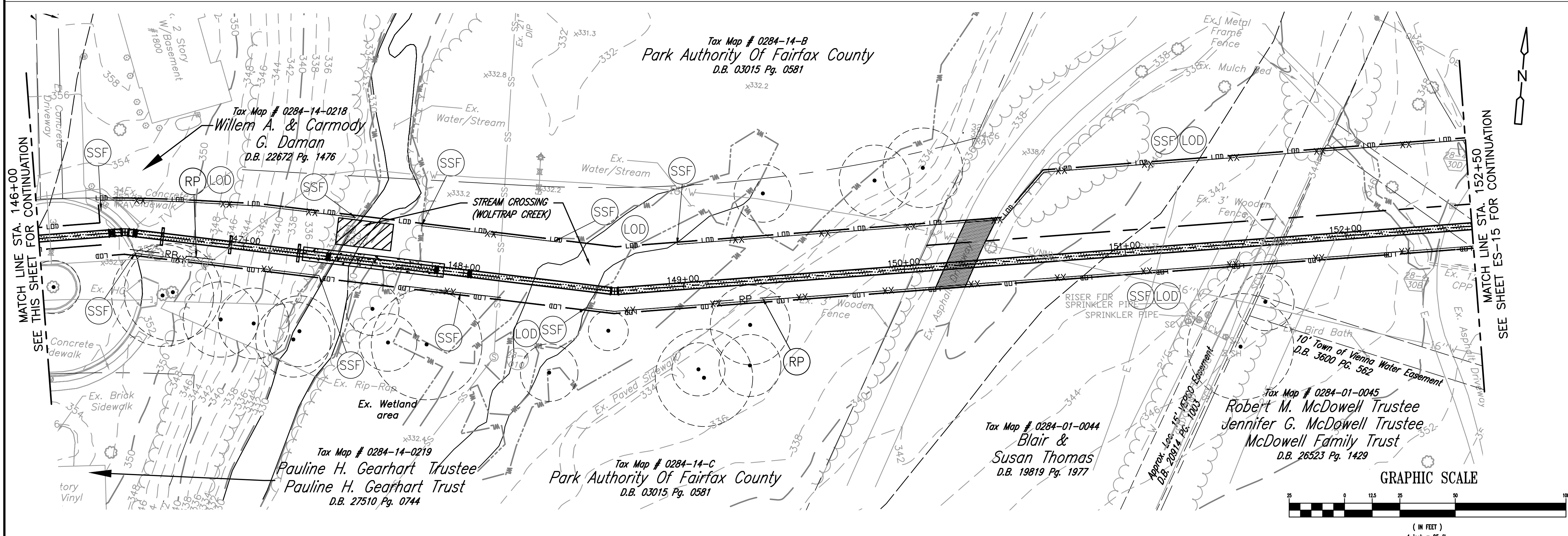
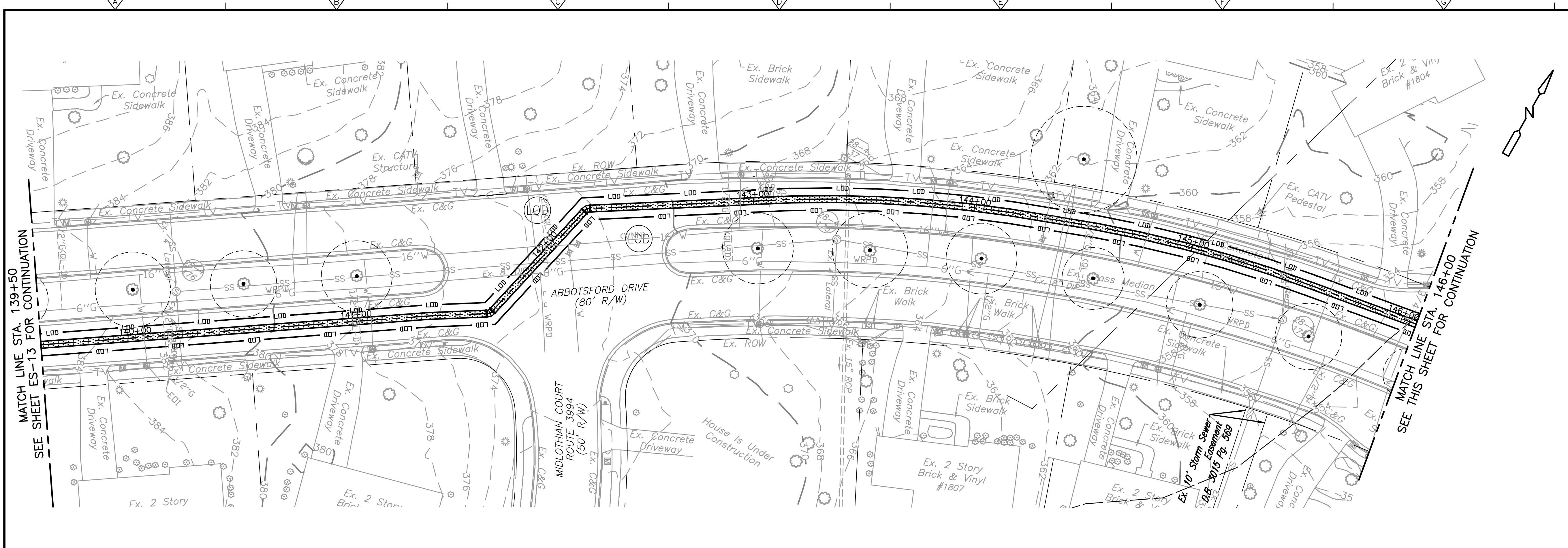
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FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

EROSION AND SEDIMENT CONTROL PLAN
 STA 126+50 TO STA 139+50

PROJECT NO. 5003-244105
 FILE NAME E13-17 ES PLAN
 SHEET NO.
ES-13

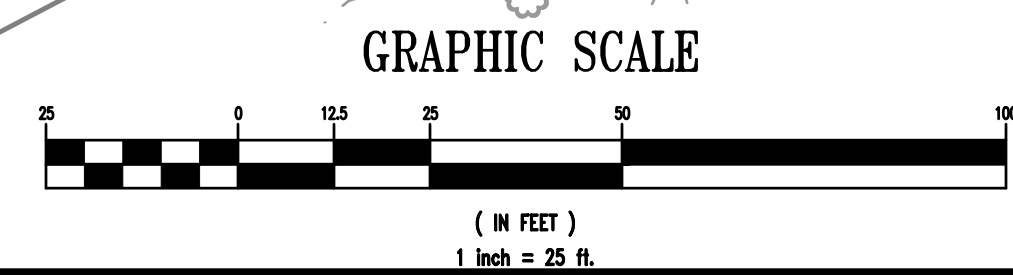


- EROSION CONTROL NOTES:**
1. ALL PERIMETER CONTROLS SHALL BE INSTALLED AS A FIRST STEP MEASURE AND PRIOR TO ANY DEMOLITION BEGINNING.
 2. CONTRACTOR IS RESPONSIBLE FOR KEEPING ALL CONSTRUCTION EQUIPMENT WITHIN THE STORAGE AND STAGING AREA DIRECTED BY THE COUNTY INSPECTOR. ALL EQUIPMENT SHALL BE PROTECTED BY E&S MEASURES AT ALL TIMES.
 3. SAFETY FENCE (SAF) AND SUPER SILT FENCE (SSF) SHOWN OFFSET FROM LIMITS OF DISTURBANCE FOR PICTORIAL PURPOSES ONLY. THE SAF AND SSF SHOULD BE LOCATED AT THE LIMITS OF DISTURBANCE.
 4. CONTRACTOR SHALL PROVIDE WATER TRUCK OR OTHER SOURCE OF WATER FOR CLEANING VEHICLES ACCESSING THE SITE AND CONSTRUCTION ENTRANCE WASH RACK DURING CONSTRUCTION.
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 7. CONTRACTOR IS RESPONSIBLE FOR PROTECTING EXISTING UTILITIES DURING CONSTRUCTION.
 8. CONTRACTOR IS RESPONSIBLE FOR RE-SEEDING AND SODDING ANY GRASS AREAS DISTURBED DURING CONSTRUCTION.

EROSION CONTROL LEGEND

NO.	TITLE	KEY	SYMBOL
	ROOT PRUNING	RP	- RP -
	SUPER SILT FENCE	SSF	XX-XX
	LIMITS OF DISTURBANCE	LOD	LOD

NOTE: THIS SHEET IS PROVIDED FOR EROSION AND SEDIMENT CONTROL INFORMATION ONLY



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
 SHEET CHK'D BY: A. YEAGLE
 CROSS CHK'D BY: C. HENEGAR
 APPROVED BY: C. HENEGAR
 DATE: AUGUST 2024

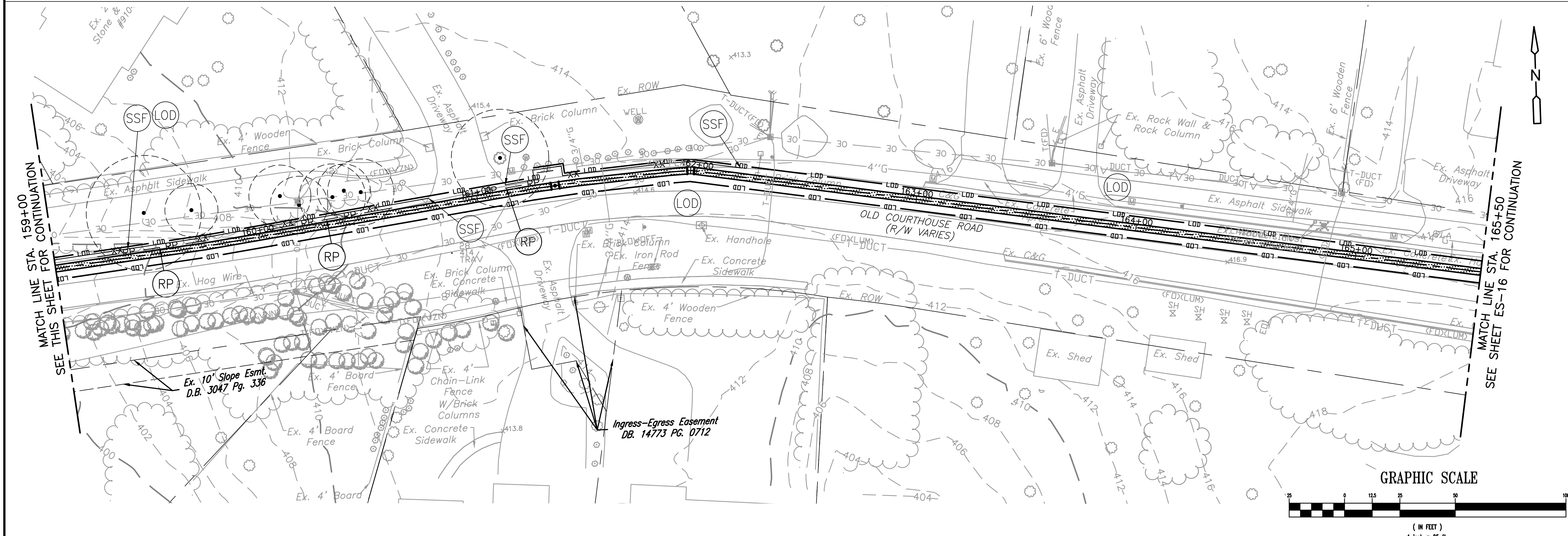
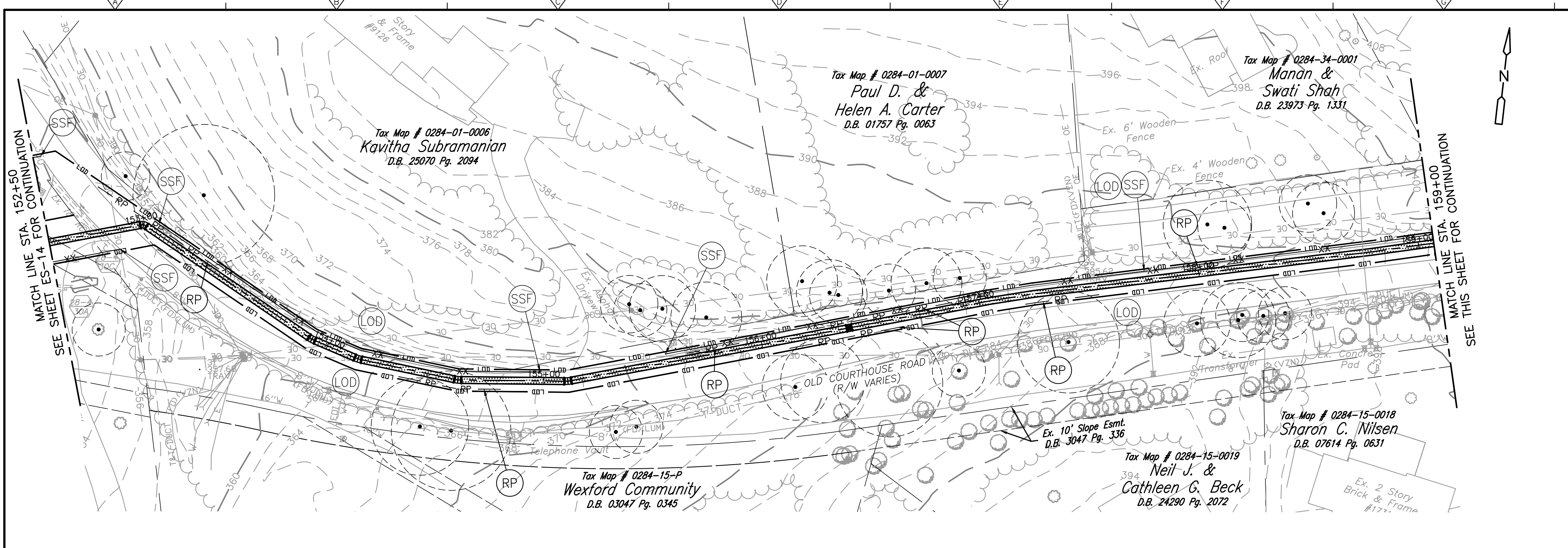
CDM Smith
 10306 Eaton Place, Suite 500
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rda
 RINKER DESIGN ASSOC.
 11109 Endeavor Court
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FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

EROSION AND SEDIMENT CONTROL PLAN
 STA 139+50 TO STA 152+50

PROJECT NO. 5003-244105
 FILE NAME ES13-17 ES PLAN
 SHEET NO. ES-14



- EROSION CONTROL NOTES:**
1. ALL PERIMETER CONTROLS SHALL BE INSTALLED AS A FIRST STEP MEASURE AND PRIOR TO ANY DEMOLITION BEGINNING.
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 8. CONTRACTOR IS RESPONSIBLE FOR RE-SEEDING AND SODDING ANY GRASS AREAS DISTURBED DURING CONSTRUCTION.

EROSION CONTROL LEGEND

NO.	TITLE	KEY	SYMBOL
3.35	MULCHING	(MU)	
	ROOT PRUNING	(RP)	
	SUPER SILT FENCE	(SSF)	
	LIMITS OF DISTURBANCE	(LOD)	

NOTE: THIS SHEET IS PROVIDED FOR EROSION AND SEDIMENT CONTROL INFORMATION ONLY

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
 SHEET CHK'D BY: A. YEAGLE
 CROSS CHK'D BY: C. HENEGAR
 APPROVED BY: C. HENEGAR
 DATE: AUGUST 2024

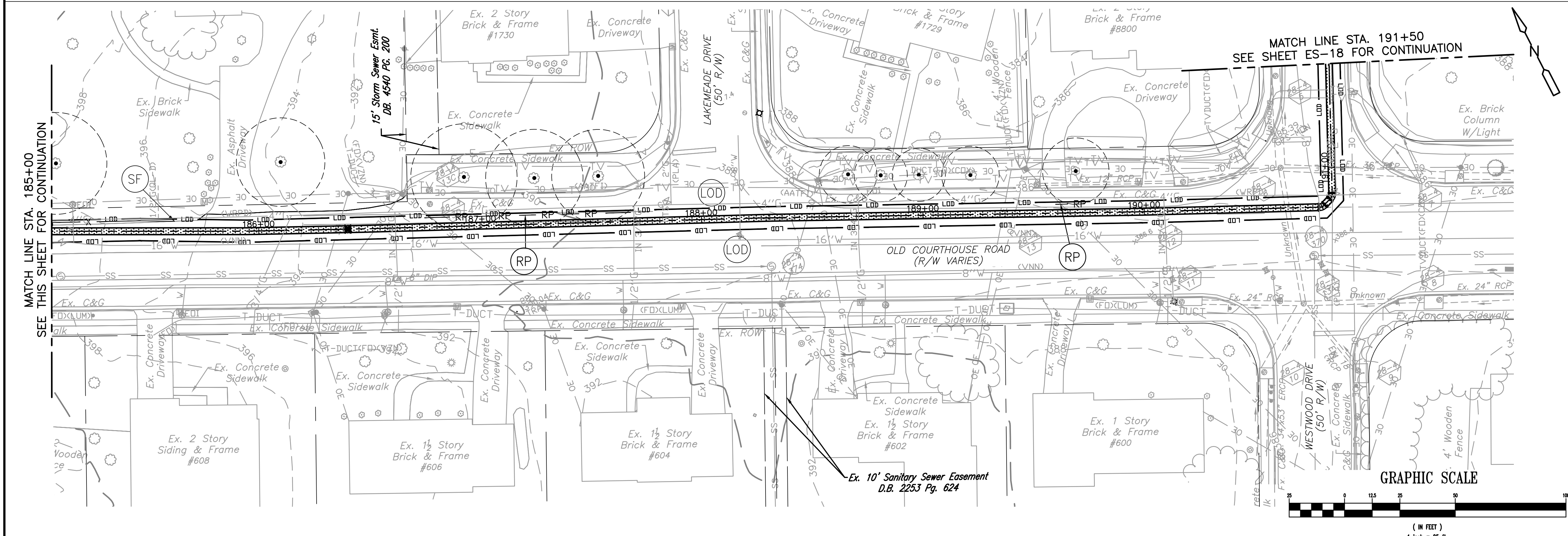
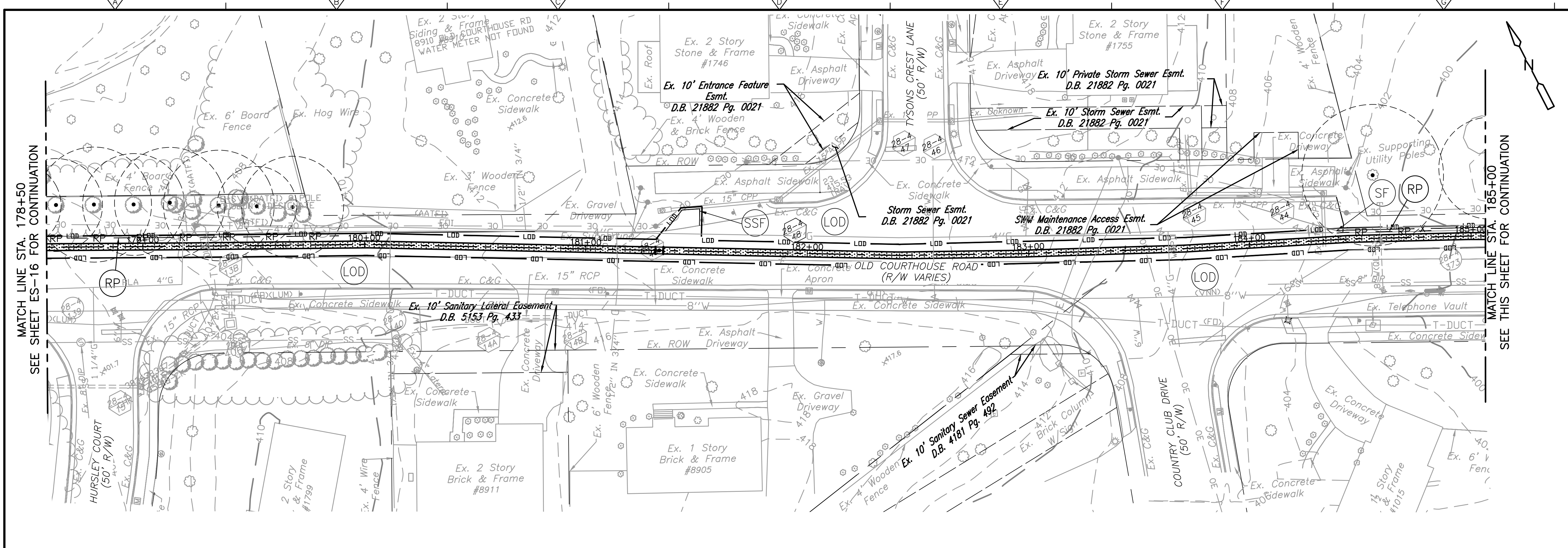
CDM Smith
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 Fairfax, VA 22030
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 RINKER DESIGN ASSOC.
 11100 Endeavor Court
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FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

EROSION AND SEDIMENT CONTROL PLAN
 STA 152+50 TO STA 165+50

PROJECT NO. 5003-244105
 FILE NAME ES13-17 ES PLAN
 SHEET NO. ES-15

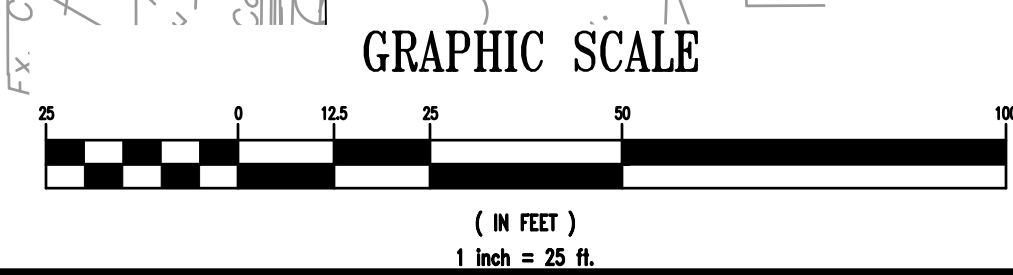


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EROSION CONTROL LEGEND

NO.	TITLE	KEY	SYMBOL
3.05	SILT FENCE	SF	-X-X-
	ROOT PRUNING	RP	- RP -
	SUPER SILT FENCE	SSF	XX-XX
	LIMITS OF DISTURBANCE	LOD	LOD

NOTE: THIS SHEET IS PROVIDED FOR EROSION AND SEDIMENT CONTROL INFORMATION ONLY



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
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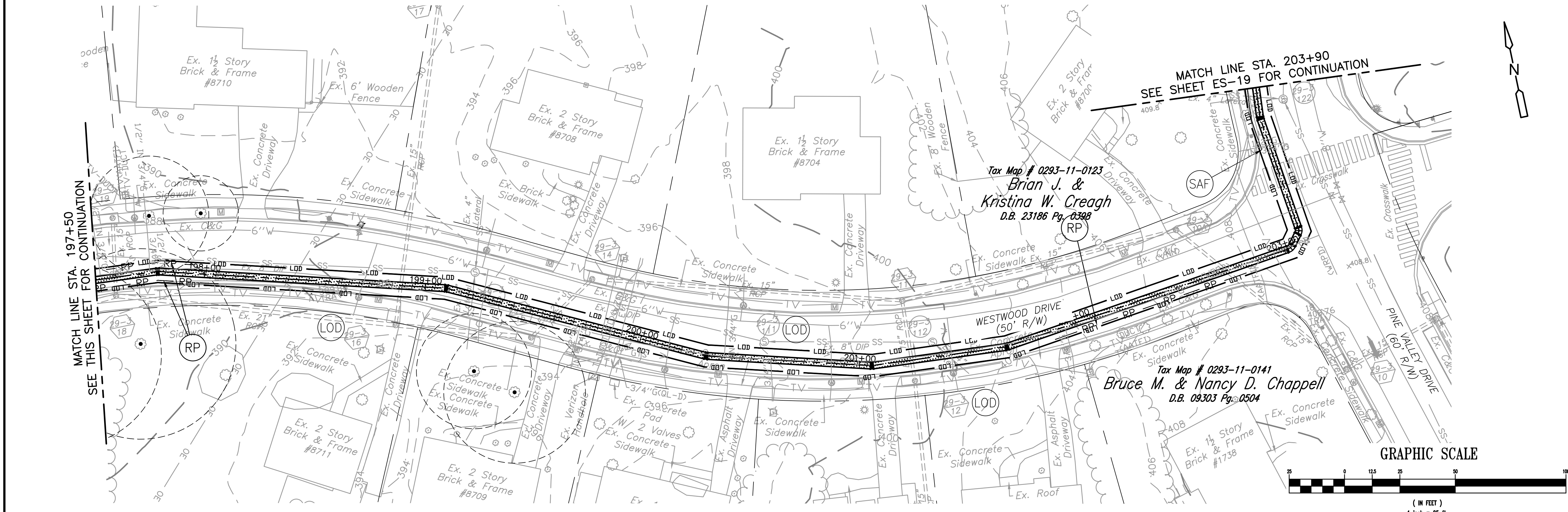
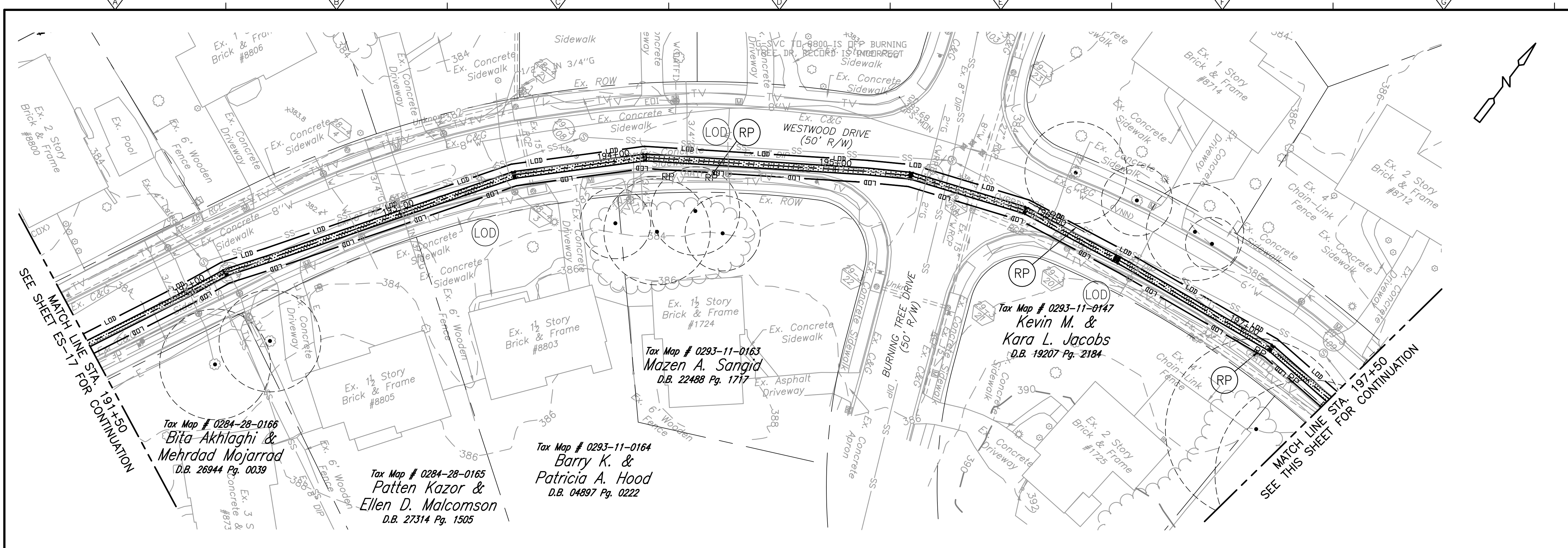
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FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

EROSION AND SEDIMENT CONTROL PLAN
 STA 178+50 TO STA 191+50

PROJECT NO. 5003-244105
 FILE NAME ES13-17 ES PLAN
 SHEET NO. ES-17

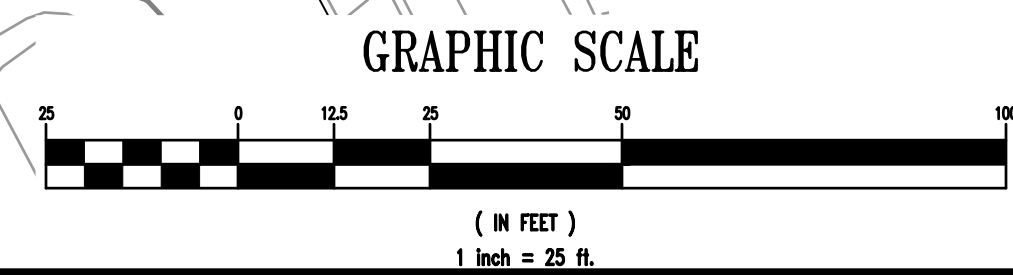


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EROSION CONTROL LEGEND

NO.	TITLE	KEY	SYMBOL
3.01	SAFETY FENCE	SAF	
	ROOT PRUNING	RP	
	LIMITS OF DISTURBANCE	LOD	

NOTE: THIS SHEET IS PROVIDED FOR EROSION AND SEDIMENT CONTROL INFORMATION ONLY



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
 SHEET CHK'D BY: A. YEAGLE
 CROSS CHK'D BY: C. HENEGAR
 APPROVED BY: C. HENEGAR
 DATE: AUGUST 2024

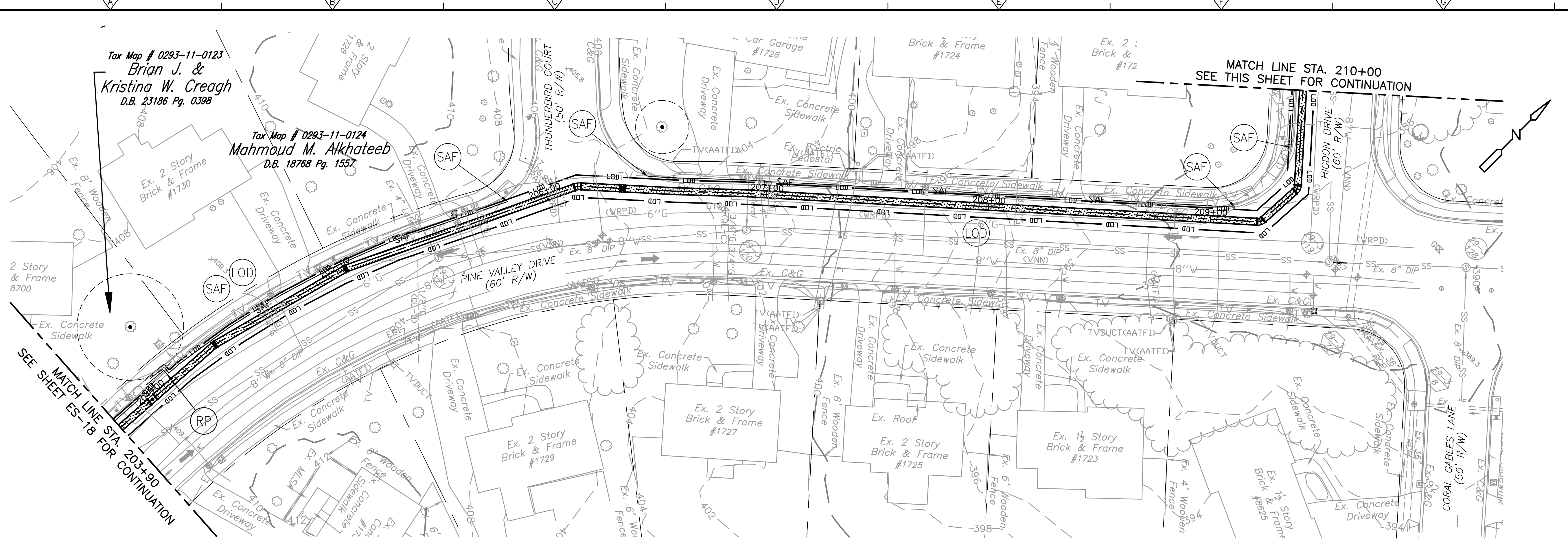
CDM Smith
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rda
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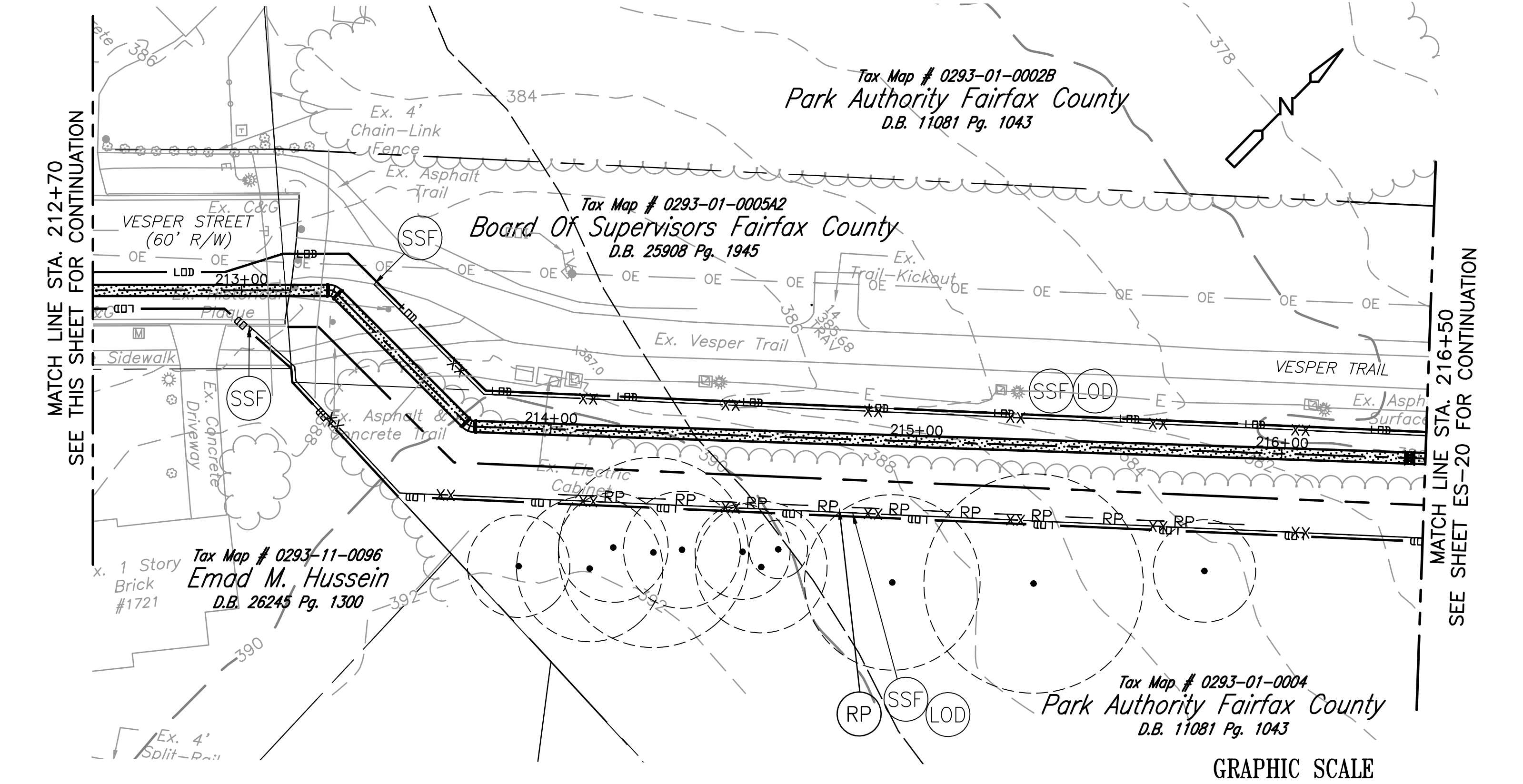
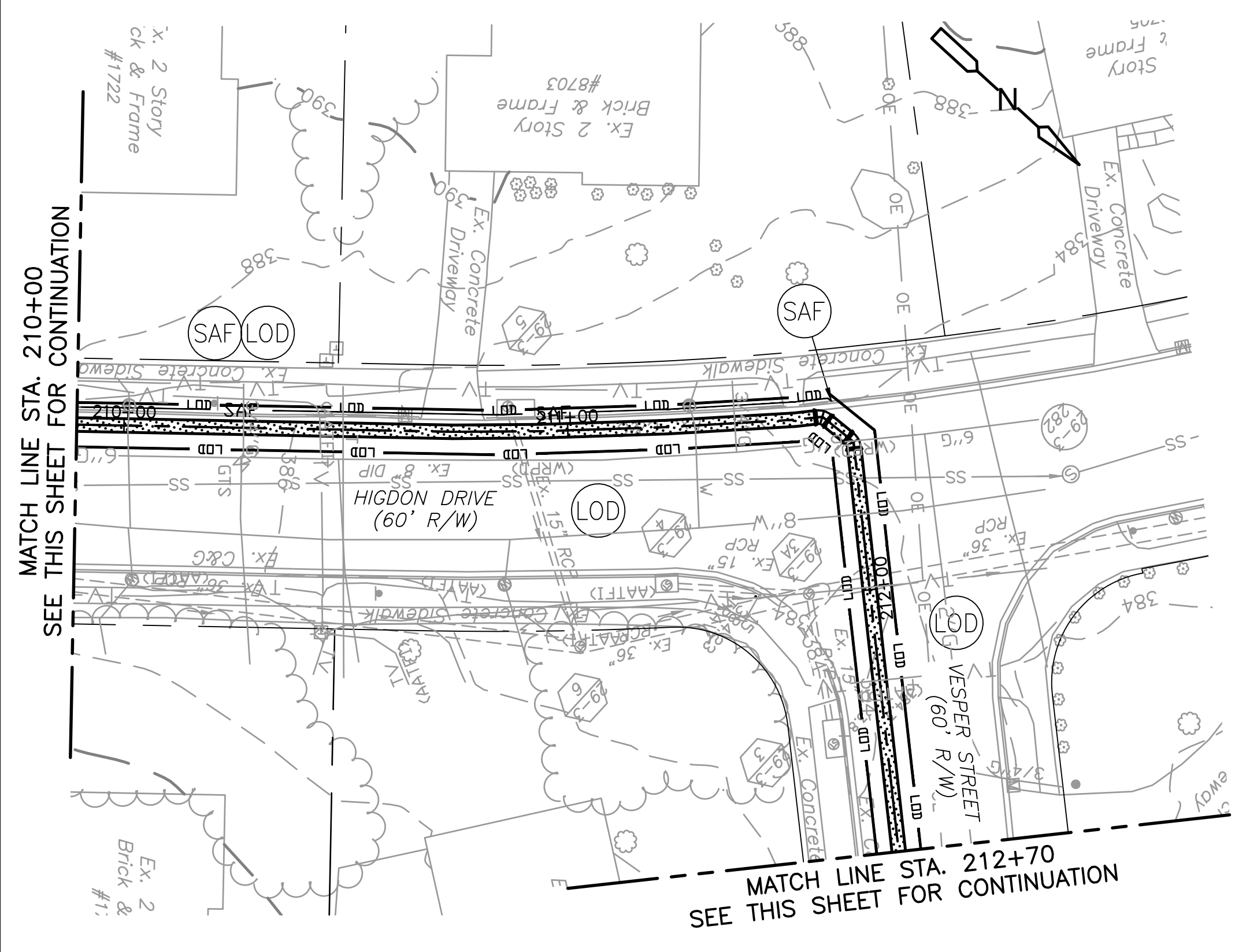
FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

EROSION AND SEDIMENT CONTROL PLAN
 STA 191+50 TO STA 203+90

PROJECT NO. 5003-244105
 FILE NAME ES18-21 ES PLAN
 SHEET NO. ES-18



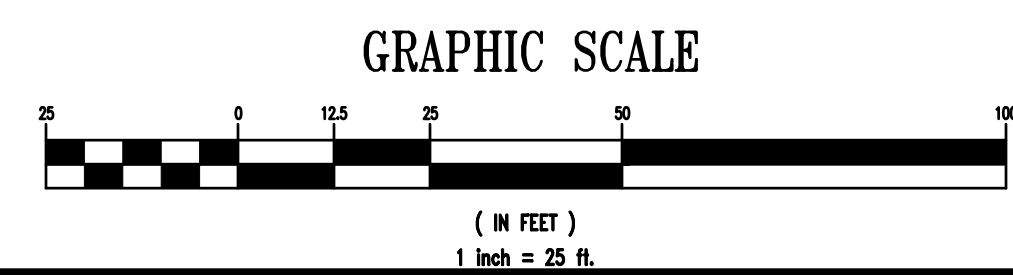
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EROSION CONTROL LEGEND

NO.	TITLE	KEY	SYMBOL
3.01	SAFETY FENCE	SAF	
	ROOT PRUNING	RP	- RP -
	SUPER SILT FENCE	SSF	XX-XX
	LIMITS OF DISTURBANCE	LOD	

NOTE: THIS SHEET IS PROVIDED FOR EROSION AND SEDIMENT CONTROL INFORMATION ONLY



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
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 APPROVED BY: C. HENEGAR
 DATE: AUGUST 2024

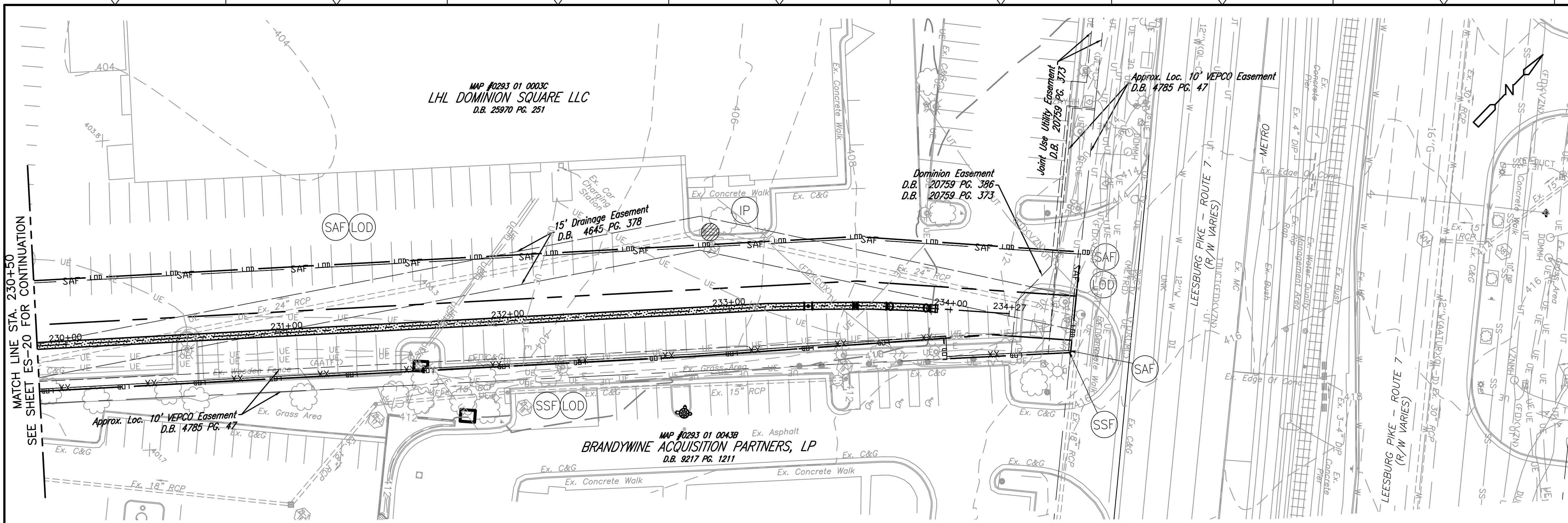
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FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

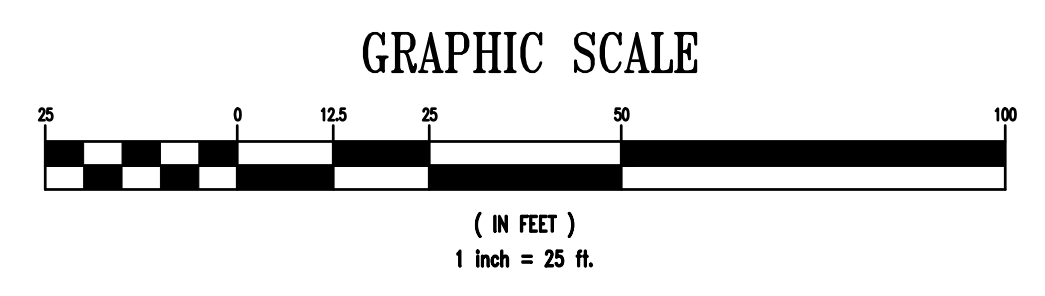
EROSION AND SEDIMENT CONTROL PLAN
 STA 203+90 TO STA 216+50

PROJECT NO. 5003-244105
 FILE NAME ES18-21 ES PLAN
 SHEET NO. **ES-19**



- EROSION CONTROL NOTES:**
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MATCH LINE STA. 230+50
SEE SHEET ES-20 FOR CONTINUATION



EROSION CONTROL LEGEND

NO.	TITLE	KEY	SYMBOL
3.01	SAFETY FENCE	SAF	
3.07	STORM DRAIN INLET PROTECTION	IP	
	SUPER SILT FENCE	SSF	
	LIMITS OF DISTURBANCE	LOD	

NOTE: THIS SHEET IS PROVIDED FOR EROSION AND SEDIMENT CONTROL INFORMATION ONLY

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
 SHEET CHK'D BY: A. YEAGLE
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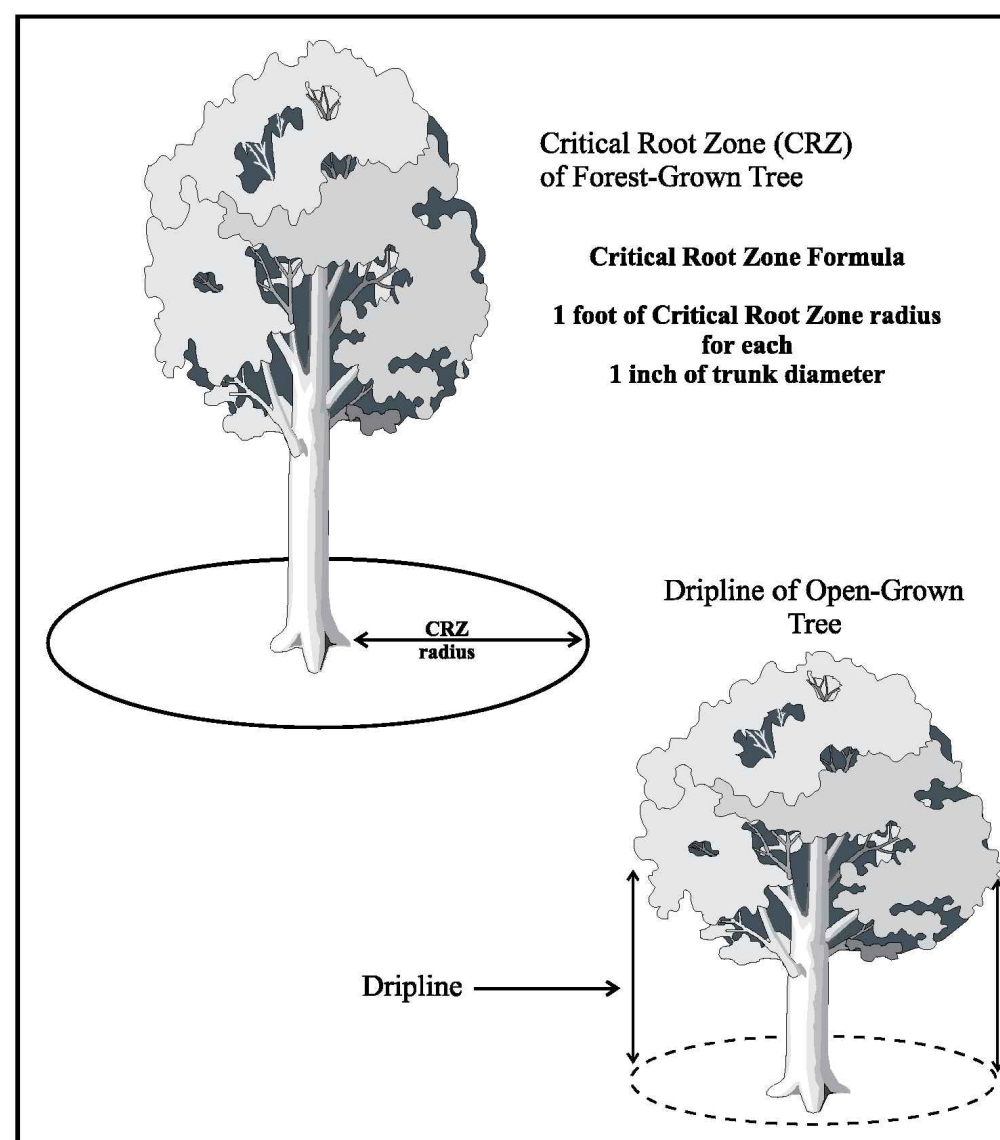
rda
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FAIRFAX COUNTY, VIRGINIA
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 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

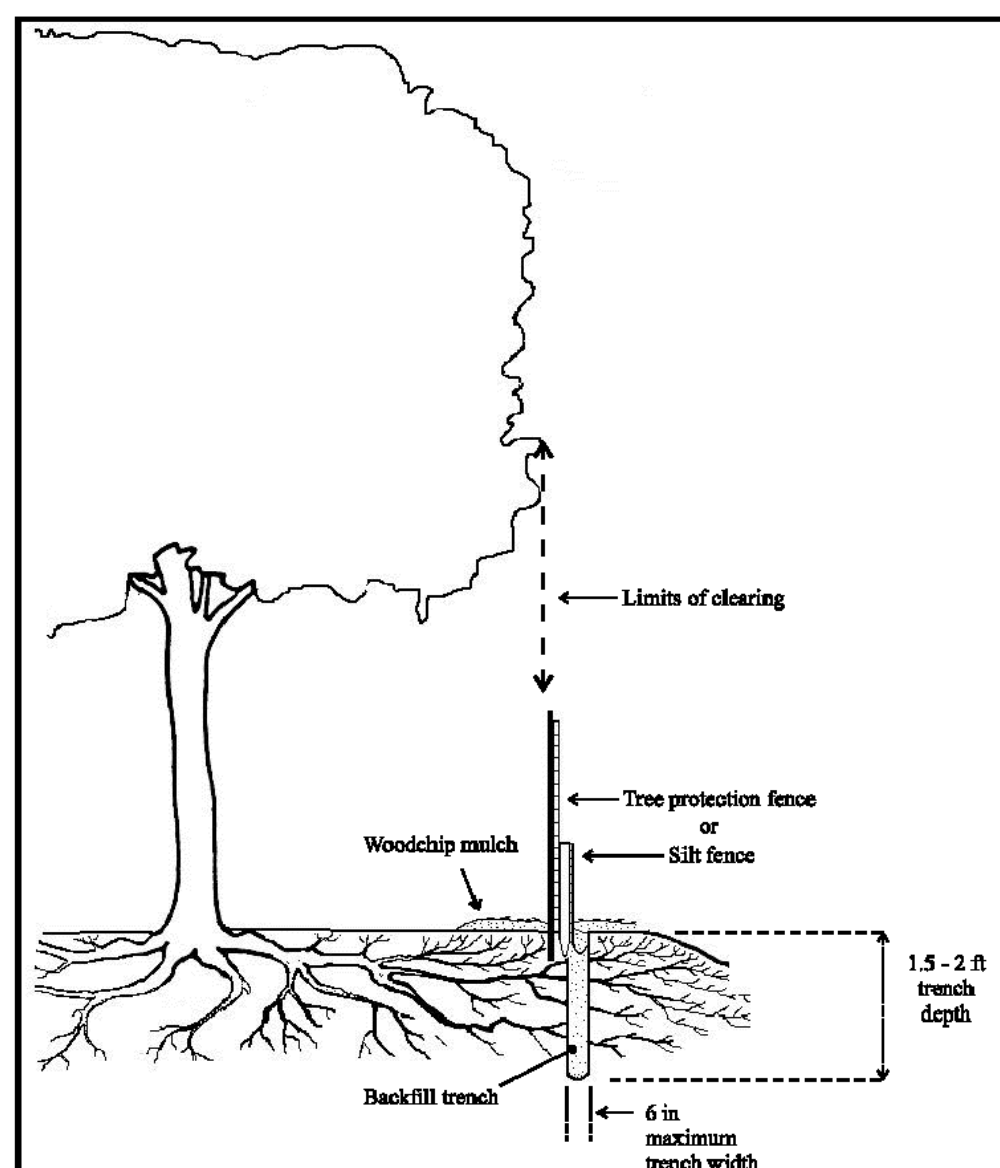
EROSION AND SEDIMENT CONTROL PLAN
 STA 230+50 TO STA 233+52

PROJECT NO. 5003-244105
FILE NAME ES18-21 ES PLAN
SHEET NO. ES-21

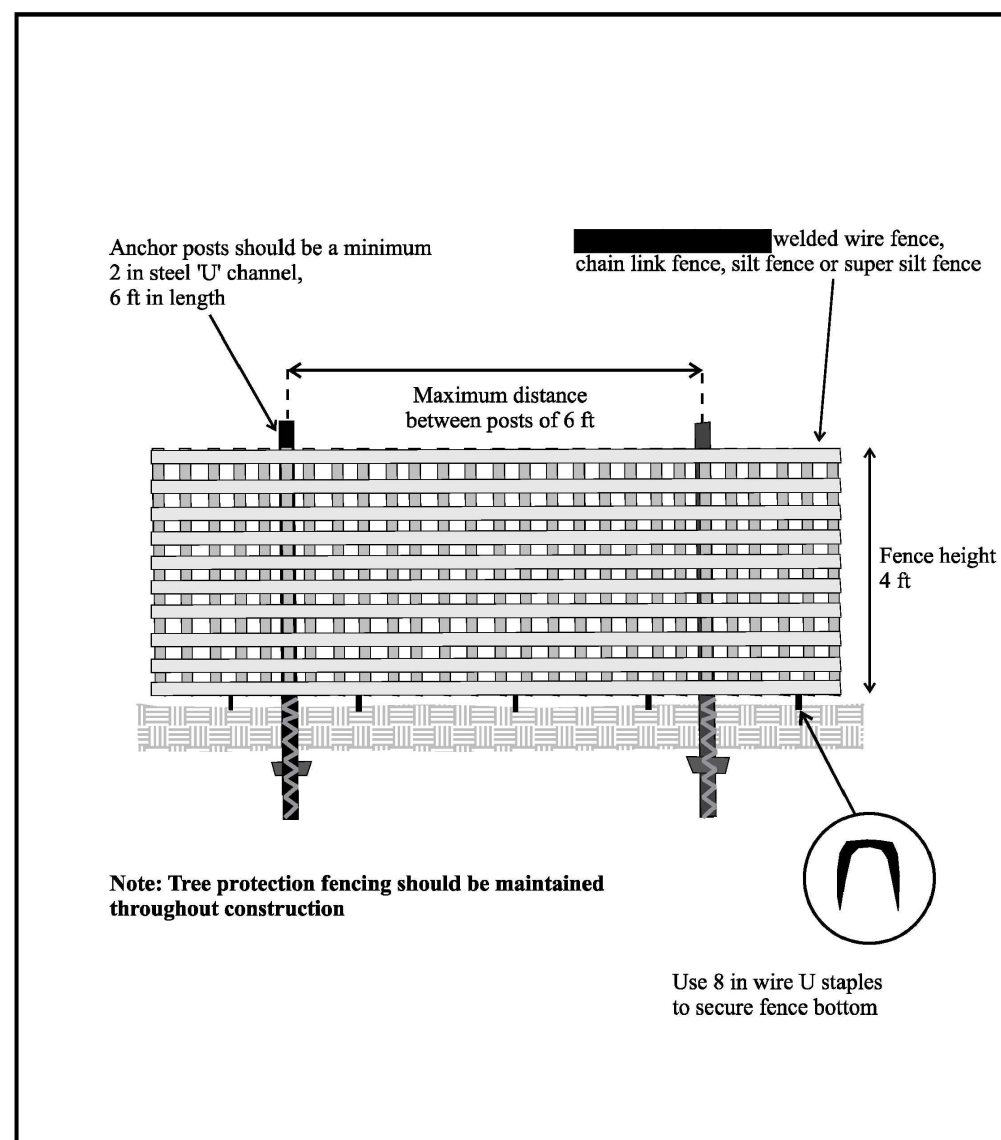
TREE PRESERVATION DETAILS



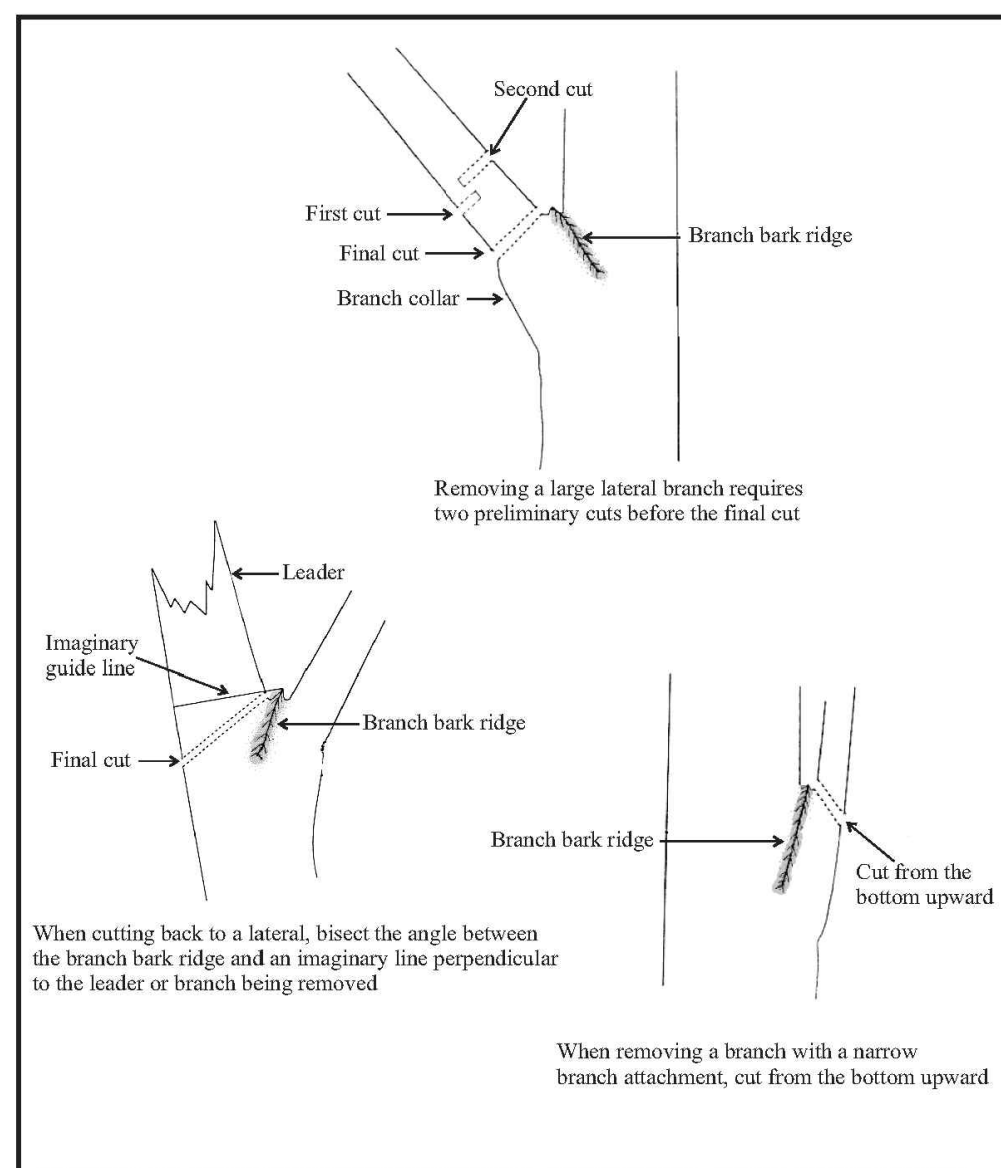
Ref. Sec. 12-0507.2D	CRITICAL ROOT ZONES AND DRIPLINES OF TREES	PLATE NO.	STD. NO.
Rev. 2-02, 2011 Reprint		2-12	



Ref. Sec. 12-0702.1 12-0704.20	ROOT PRUNING	PLATE NO.	STD. NO.
Rev. 2-02, 2011 Reprint		7-12	



Adapted from: <i>Woodland Conservation Manual</i> , Prince George County, Maryland	TREE PROTECTION FENCE INSTALLATION	PLATE NO.	STD. NO.
Ref. Sec. 12-0703.1B, 12-0905.1B		6-12	
Rev. 2-02, 2011 Reprint			



Adapted from: <i>Tree, Shrub and Other Woody Plant Maintenance - Standard Practices - American National Standard for Tree Care Operations</i> , American National Standards Institute	PRUNING CUTS	PLATE NO.	STD. NO.
Ref. Sec. 12-0506.5A		9-12	
Rev. 3-02, 2011 Reprint, 2018 Reprint			

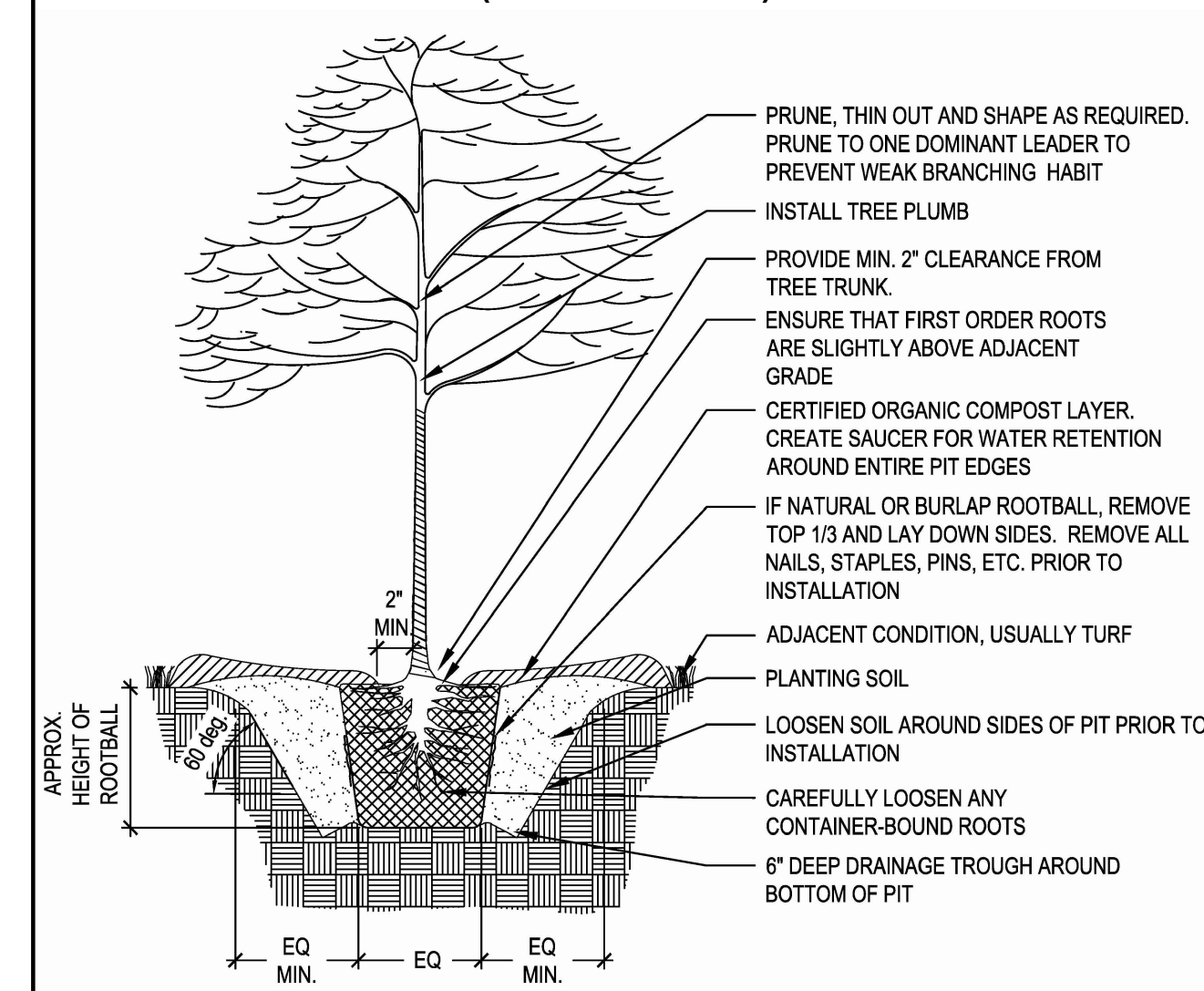
TREE PRESERVATION NARRATIVE

- PRIOR TO ANY CONSTRUCTION ACTIVITY, ALL INDIVIDUAL TREES AND GROUPS OF TREES SHOWN TO BE PRESERVED ON THE TREE PRESERVATION PLAN SHALL BE PROTECTED BY FENCING A MINIMUM OF FOUR FEET IN HEIGHT, PLACED AT THE LIMITS OF DISTURBANCE, OR AS DETERMINED BY FAIRFAX COUNTY URBAN FORESTRY DIVISION REPRESENTATIVES DURING THE PRE-CONSTRUCTION MEETING. TREE PROTECTION FENCING SHALL BE 14 GAUGE STEEL WELDED WIRE "FARM FENCE", ON 6 FOOT STEEL POSTS DRIVEN INTO THE GROUND 18 INCHES AND PLACED NOT MORE THAN 6 FEET APART. SUPER-SILT FENCE IS ALSO ACCEPTABLE FOR USE AS TREE PROTECTION FENCING. AT THE PRE-CONSTRUCTION WALK-THROUGH, THE URBAN FORESTER AND THE PROJECT ARBORIST WILL DETERMINE WHAT SPECIFIC TREE PROTECTION FENCE (SUPER SILT FENCE OR 14 GAUGE WELDED WIRE FENCE) SHALL BE USED ALONG EACH SECTION OF THE LIMITS OF CLEARING AND GRADING.
- SILT FENCE OR SUPER SILT FENCE, IF REQUIRED, MAY BE INSTALLED IN THE ROOT-PRUNING TRENCH. IF SUPER SILT FENCE IS USED, IT MAY SERVE AS TREE PRESERVATION FENCING. OTHER TYPES OF TREE PRESERVATION FENCING SHALL BE PLACED BETWEEN THE AREA TO BE CLEARED AND THE ROOT-PRUNING TRENCH.
- THE TREE PROTECTION FENCING SHALL BE MADE CLEARLY VISIBLE TO ALL CONSTRUCTION PERSONNEL WITH SIGNS POSTED EVERY 30 FEET ON THE FENCE STATING IN ENGLISH AND SPANISH THAT IT IS A TREE PRESERVATION AREA AND NO ENTRY IS PERMITTED. THE FENCING SHALL BE INSTALLED PRIOR TO ANY WORK BEING CONDUCTED ON THE SITE, INCLUDING THE DEMOLITION OF ANY EXISTING STRUCTURES OR FENCES.
- ALL CONSTRUCTION MOBILIZATION/ACTIVITY, MATERIALS STORAGE, AND MOTORIZED EQUIPMENT SHALL BE PROHIBITED BEYOND THE LIMITS OF DISTURBANCE SHOWN ON THE TREE PRESERVATION PLAN UNLESS MODIFIED BY THE BY FAIRFAX COUNTY REPRESENTATIVES.
- ROOT PRUNING: ROOT PRUNING SHALL BE PERFORMED ALONG THE LIMITS OF CLEARING AND GRADING AS SHOWN ON THE TREE PRESERVATION PLAN PRIOR TO ANY OTHER SITE DISTURBANCE. A TRENCHER, STUMP GRINDER, OR AIRTOOL-AND-HANDSAW SHALL BE USED TO A DEPTH OF 18 INCHES, CUTTING ALL ROOTS LARGER THAN TWO INCHES IN DIAMETER. IMMEDIATELY AFTER ROOT PRUNING, THE TRENCH SHALL BE BACKFILLED. ROOT-PRUNING TRENCHES SHOULD BE MULCHED WITH WOOD CHIPS OR MULCH FOUR INCHES DEEP. ROOT PRUNING SHALL BE DONE PRIOR TO ANY SITE WORK OR INSTALLATION OF SILTATION CONTROL MEASURES UNLESS AUTHORIZED BY FAIRFAX COUNTY URBAN FORESTRY DIVISION REPRESENTATIVES.
- CLEARING OPERATIONS: TREES TO BE REMOVED SHALL BE FELLED IN SUCH A MANNER AS TO PRESERVE THE TREES THAT ARE TO REMAIN. TREES DIRECTLY ADJACENT TO BUT WITHIN THE LIMITS OF DISTURBANCE SHALL BE FELLED BY HAND, USING A CHAIN SAW. THE STUMPS OUTSIDE OF THE AREAS BEING GRADED SHALL REMAIN IN PLACE. TREE REMOVAL SHALL BE DONE ONLY AFTER ROOT PRUNING HAS OCCURRED AS SHOWN ON THE TREE PRESERVATION PLAN. TREE REMOVAL ALONG THE LIMITS OF DISTURBANCE SHALL BE DONE IN A MANNER THAT DOES NOT INJURE TREES TO BE PRESERVED. STUMPS SHALL BE GROUND OUT WHERE NECESSARY TO PROTECT TREES BEING PRESERVED. ALL TREE CLEARING ACTIVITIES SHALL BE RESTRICTED TO OCCUR DURING THE INACTIVE SEASON FOR THE NORTHERN LONG-EARED BAT (NLEB).
- TREES ADJACENT TO LIMITS OF DISTURBANCE, WHICH ARE INDIVIDUALLY IDENTIFIED TO BE REMOVED SHALL BE FELLED BY HAND WITH A CHAIN SAW AND THE STUMPS SHALL REMAIN IN PLACE. SUCH TREES SHALL BE FELLED IN A MANNER THAT DOES NOT INJURE TREES TO BE PRESERVED. TREES TO BE REMOVED SHALL BE DROPPED INTO THE AREA TO BE CLEARED, OR PIECED DOWN. THESE TREES SHALL BE MOVED INTO THE AREA TO BE CLEARED WITHOUT INJURING REMAINING VEGETATION.
- OFF-SITE AND JOINTLY OWNED TREES SHOULD RECEIVE SPECIAL ATTENTION; DISCUSS THE PROJECT WITH OWNERS OF SUCH TREES BEFORE STARTING WORK IF THEIR TREES ARE AFFECTED BY CONSTRUCTION.
- TREE CARE PROCEDURES SHALL MEET OR EXCEED AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) STANDARD PRACTICES FOR TREES, SHRUBS, AND OTHER WOODY PLANT MAINTENANCE ANSI A300.
- ALL OF THE REQUIREMENTS OF THE PUBLIC FACILITIES MANUAL SHALL BE MET.
- DEMOLITION OPERATIONS: BUILDINGS, CONCRETE PADS, AND CONCRETE OR ASPHALT PATHS AND DRIVEWAYS OR ROADWAYS, DEBRIS AND JUNK WITHIN OR ADJACENT TO TREE CONSERVATION AREAS SHALL BE REMOVED IN SUCH A WAY THAT TREES TO BE PRESERVED ARE NOT DAMAGED. EQUIPMENT SHALL AT ALL TIMES REMAIN ON CONCRETE OR WOOD-CHIP PADDED SURFACES RATHER THAN POSITIONING ON SOIL OR VEGETATION. BUILDINGS NEAR TREES TO BE SAVED SHALL BE PULLED OVER, AWAY FROM TREES, USING CABLES, RATHER THAN PUSHED OVER WITH EQUIPMENT. CONCRETE AND DEBRIS WITHIN TREE PRESERVATION AREAS SHALL BE PULLED UP AND LOADED ONTO EQUIPMENT WITHOUT THE EQUIPMENT LEAVING THE CONCRETE OR WOOD-CHIP PADDED SURFACES.
- INFORMATION IN THESE PLAN NOTES, TREE INVENTORY, AND ALL PLANS RELATED TO TREES REFER ONLY TO TREES INDICATED WITHIN THE SITE AREA; NO OTHER TREES WERE EXAMINED.
- PROJECT ARBORIST SHALL MONITOR SITE WEEKLY UNTIL PHASE I EROSION AND SEDIMENT CONTROLS ARE IN PLACE AND MONTHLY THEREAFTER UNTIL THE PROJECT IS COMPLETED.
- CONTRACTOR AND CONTRACTOR'S I.S.A. CERTIFIED ARBORIST SHALL COORDINATE WITH FAIRFAX COUNTY REPRESENTATIVES PRIOR TO CONSTRUCTION TO DETERMINE FULL EXTENT OF TREES TO BE REMOVED.
- TREE ROOT PRUNING SHALL OCCUR PRIOR TO GRADING (CUT OR FILL) ACTIVITIES, AND PRIOR TO OPERATING HEAVY EQUIPMENT UNDER CANOPY TREES. BRANCH PRUNING SHALL OCCUR DURING CONSTRUCTION IN ORDER TO SAVE EXISTING VEGETATION TO THE GREATEST EXTENT PRACTICABLE. ALL TREE CANOPY PRUNING MUST BE PERFORMED AS DIRECTED BY CONTRACTOR'S I.S.A. CERTIFIED ARBORIST.
- CONTRACTOR TO PROVIDE TREE TRUNK PROTECTION FOR 12" CALIPER OR LARGER TREES BEING SAVED WITHIN 5 FEET OF CONSTRUCTION STAGING AND ACCESS AREAS.
- CONTRACTOR IS RESPONSIBLE FOR FLAGGING LIMITS OF DISTURBANCE PRIOR THE PRE-CONSTRUCTION MEETING.
- FOR EACH TREE REMOVED, ONE NURSERY STOCK SIZE TREE 1 INCH IN CALIPER SHALL BE PROVIDED.

PLANTING INSTALLATION GUIDELINES

- CONTRACTOR AND OWNER SHALL BE RESPONSIBLE FOR MAKING THEMSELVES FAMILIAR WITH ALL UNDERGROUND UTILITIES, PIPES AND STRUCTURES, BY CONTACTING "MISS UTILITY" 72 HOURS PRIOR TO DIGGING. CONTRACTOR SHALL TAKE SOLE RESPONSIBILITY FOR ANY COST INCURRED DUE TO DAMAGE TO SAID UTILITIES.
- DO NOT WILLFULLY PROCEED WITH PLANTING AS DESIGNED WHEN IT IS OBVIOUS THAT CONDITIONS AND/OR OBSTRUCTIONS EXIST THAT MAY NOT HAVE BEEN KNOWN DURING DESIGN. SUCH CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER. THE CONTRACTOR MAY BE RESPONSIBLE FOR ALL NECESSARY REVISIONS DUE TO FAILURE TO GIVE SUCH NOTIFICATION TO THE OWNER SO THAT MATERIAL CAN BE RELOCATED OR CONDITIONS CORRECTED PRIOR TO PLANTING.
- SHOULD THE LANDSCAPE CONTRACTOR ENCOUNTER SOIL CONDITIONS WHICH INDICATE POTENTIAL FOR POOR DRAINAGE, PLANTING BEDS AND MATERIAL MAY BE RAISED SLIGHTLY, NO MORE THAN SIX (6) INCHES ABOVE EXISTING GRADES, TO COMPENSATE FOR THESE CONDITIONS. WHERE STANDING WATER, OR AREAS WHICH DO NOT DRAIN AT ALL ARE ENCOUNTERED, THESE AREAS MAY REQUIRE THE INSTALLATION OF UNDERGROUND DRAINAGE. THE CONTRACTOR SHALL BRING THESE CONDITIONS TO THE ATTENTION OF THE OWNER FOR CORRECTIVE DRAINAGE PROCEDURES, OR RELOCATION OF THE PLANT MATERIAL.
- PLANT MATERIAL INSTALLED BY A LANDSCAPE CONTRACTOR, UNLESS OTHERWISE SPECIFIED OR DETAILED ON THESE DRAWINGS, SHALL CONFORM TO THE SECOND EDITION OF "THE LANDSCAPE SPECIFICATIONS GUIDELINES FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS" AS PUBLISHED BY THE AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS POTOMAC CHAPTER AND THE LANDSCAPE CONTRACTORS ASSOCIATION OF METROPOLITAN WASHINGTON. THESE PLANTING STANDARDS HAVE ALSO BEEN SUPPLEMENTED BY THE PLANTING GUIDELINES OF THE AMERICAN FOREST ASSOCIATION.
- ANY DEVIATION FROM THE PLANTING LOCATION SHOWN ON THIS PLAN, SHALL BE APPROVED BY THE COUNTY ARBORIST AND FAIRFAX COUNTY PARK AUTHORITY (FCPA) NATURAL RESOURCES BRANCH. CONTRACTOR SHOULD NOTIFY THE OWNER FOR INSPECTION AFTER LAYOUT OF EACH AREA IS COMPLETE AND BEFORE FINAL INSTALLATION OF THE PLANT MATERIAL.
- ALL TREES SHALL BE PLANTED IN STRICT ACCORDANCE WITH THE PLANTING DETAIL PROVIDED.

TYPICAL TREE PLANTING DETAIL (NOT TO SCALE)



PROPOSED PLANT LIST

SYM.	QUAN.	COMMON NAME	BOTANICAL NAME	SIZE	ROOT	PROJ. 10 YEAR TREE COVER (SQ. FT.)	TOTAL PROJ. TREE COVER (SQ. FT.)
RB	60	RIVER BIRCH	BETULA NIGRA	1" CAL.	B & B	150	9,000
PO	59	PIN OAK	QUERCUS PALUSTRIS	1" CAL.	B & B	200	11,800
WO	59	WILLOW OAK	QUERCUS PHELLOS	1" CAL.	B & B	200	11,800
RM	60	RED MAPLE	ACER RUBRUM	1" CAL.	B & B	200	12,000
AS	60	AMERICAN SYCAMORE	PLATANUS OCCIDENTALIS	1" CAL.	B & B	200	12,000
TOTAL OVERSTORY TREES = 298						TOTAL CANOPY = 56,600	

NOTE: SEE PLANTING PLAN ON SHEETS TP-4 TO TP-44.

SITE MONITORING NARRATIVE

THE CONTRACTOR'S CERTIFIED ARBORIST TO PERFORM PERIODIC SITE VISITS DURING CONSTRUCTION. SITE VISITS SHALL BE DONE TO MONITOR CONSTRUCTION ACTIVITIES FOR CONFORMANCE WITH ALL DEVELOPMENT CONDITIONS AND PLAN REQUIREMENTS RELATED TO TREE PRESERVATION AND LANDSCAPING.

CONTRACTOR'S CERTIFIED ARBORIST SHALL ATTEND THE PRE-CONSTRUCTION MEETING TO IDENTIFY HAZARD TREES NEAR THE LIMITS OF DISTURBANCE, AND SHALL ATTEND THE ONSITE SUBSTANTIAL COMPLETION MEETING TOWARD THE COMPLETION OF THE PROJECT. CONTRACTOR'S CERTIFIED ARBORIST SHALL MAKE VISITS TO THE SITE DURING TREE CLEARING ACTIVITIES AT THE BEGINNING OF CONSTRUCTION AND DURING PLANTING TOWARD THE END OF CONSTRUCTION. FOUR SITE VISITS BY THE CONTRACTOR'S CERTIFIED ARBORIST ARE ANTICIPATED. ADDITIONAL PERIODIC SITE VISITS MAY BE REQUESTED BY FAIRFAX COUNTY. CONTRACTOR'S CERTIFIED ARBORIST SHALL BE RESPONSIBLE FOR SUBMITTING A SUMMARY REPORT OF CONDITIONS AND RECOMMENDATIONS AFTER EACH SITE VISIT.

ROOT PRUNING NARRATIVE

ROOT PRUNING SHALL BE PERFORMED ALONG THE LIMITS OF DISTURBANCE IN LOCATIONS ADJACENT TO AREAS WITH TREES TO BE PRESERVED PRIOR TO ANY OTHER SITE DISTURBANCE. A TRENCHER, STUMP GRINDER, OR AIRTOOL-AND-HANDSAW SHALL BE USED TO A DEPTH OF 18 INCHES, CUTTING ALL ROOTS LARGER THAN TWO INCHES IN DIAMETER. IMMEDIATELY FOLLOWING ROOT PRUNING, THE TRENCH SHALL BE BACKFILLED WITH EXCAVATED MATERIAL. ROOT PRUNING TRENCHES SHALL BE MULCHED WITH WOOD CHIPS OR MULCH FOUR INCHES DEEP. ROOT PRUNING SHALL BE DONE PRIOR TO ANY SITE WORK OR INSTALLATION OF SILTATION CONTROL MEASURES UNLESS AUTHORIZED BY FAIRFAX COUNTY URBAN FORESTRY DIVISION REPRESENTATIVES.

TREE PRESERVATION SIGN DETAIL (NOT TO SCALE)

TREE PRESERVATION AREA
KEEP OUT

NO EQUIPMENT OR MATERIALS ARE TO BE STORED OR DEPOSITED IN THIS AREA

(COMPANY NAMES AND CONTACT NUMBERS)

PENALTY FOR VIOLATIONS STRICTLY ENFORCED

- NOTES:
- SIGNS TO BE PLACED EVERY 30' ALONG LIMITS OF DISTURBANCE AND ALTERNATE BETWEEN ENGLISH AND SPANISH.
 - SPANISH TRANSLATION TO BE CONFIRMED PRIOR TO INSTALLATION.

AREA DE PRESERVACION DE ARBOLES
NO ENTRADA

NINGUN EQUIPO Y MATERIALES DEBEN SER ALMACENADOS Y DEPOSITADOS EN ESTA AREA

(COMPANY NAMES AND CONTACT NUMBERS)

HAY UNA ESTRICTA PENA POR VIOLACION

- SPECIFICATIONS:
- DIMENSIONS: WIDTH: 11 INCHES (MINIMUM)
HEIGHT: 8 INCHES (MINIMUM)
BACKGROUND COLOR: YELLOW
LETTER SIZE: LARGE: 0.48 INCHES (MINIMUM)
SMALL: 0.26 INCHES (MINIMUM)

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: <u>A. NGUYEN</u>
DRAWN BY: <u>A. NGUYEN</u>
SHEET CHK'D BY: <u>A. YEAGLE</u>
CROSS CHK'D BY: <u>C. HENEGAR</u>
APPROVED BY: <u>C. HENEGAR</u>
DATE: <u>AUGUST 2024</u>

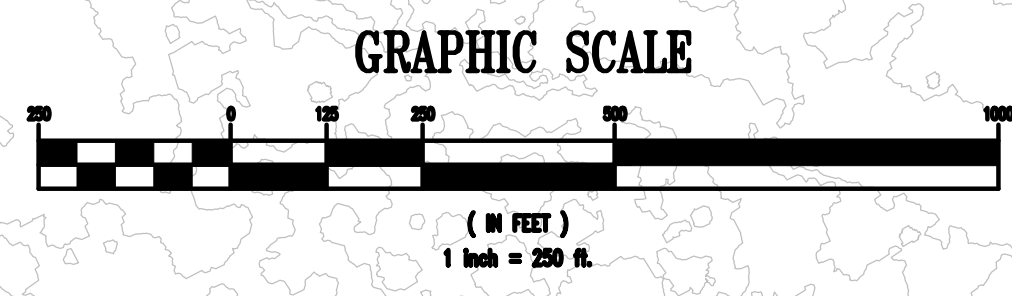
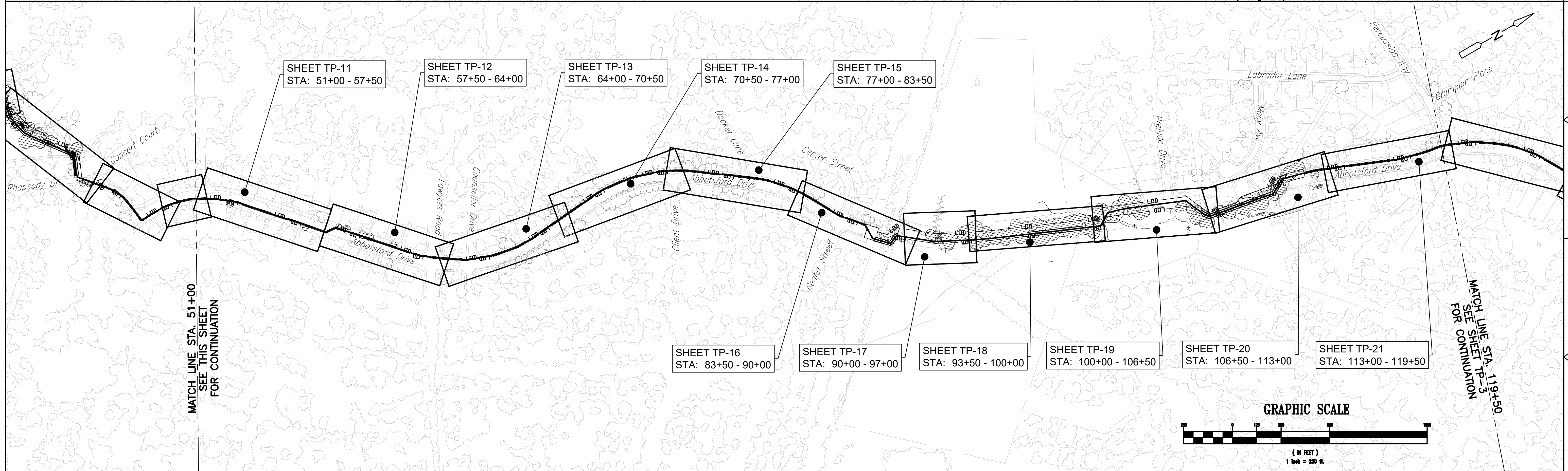
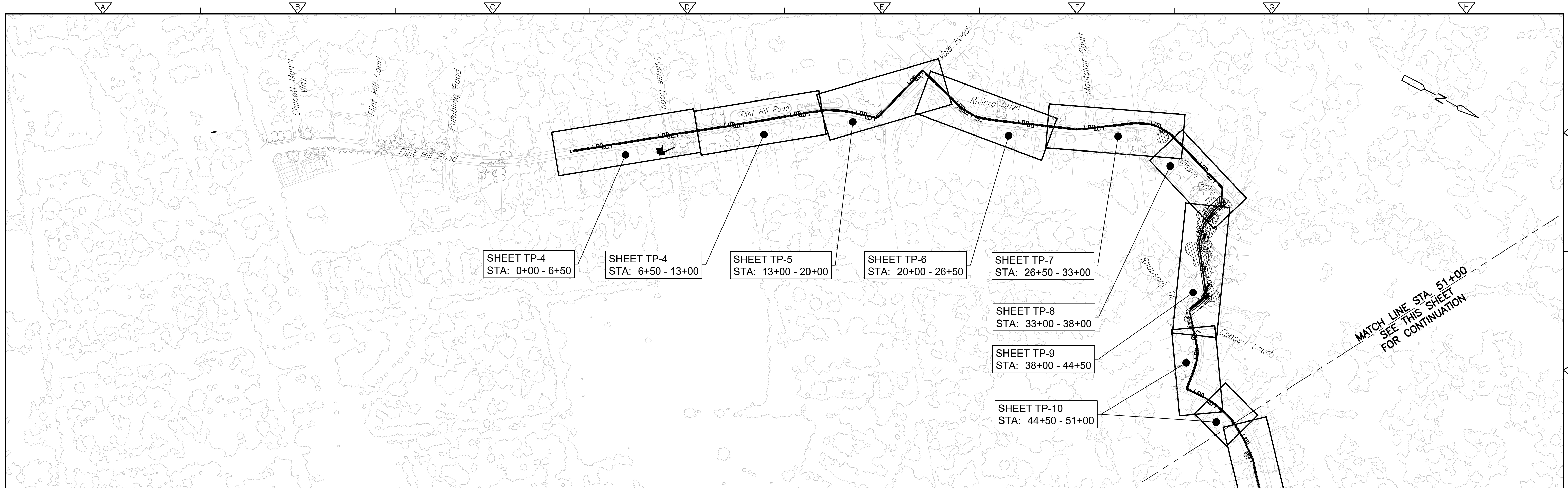
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FAIRFAX COUNTY, VIRGINIA
DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
TYSONS WASTEWATER CONVEYANCE SYSTEM
MODIFICATIONS
PACKAGE 4: FORCE MAIN

TREE PRESERVATION
AND PLANTING PLAN
NOTES AND DETAILS

PROJECT NO.	5003-244105
FILE NAME:01-03 TREE NOTE	
SHEET NO.	TP-1



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
 SHEET CHK'D BY: A. YEAGLE
 CROSS CHK'D BY: C. HENEGAR
 APPROVED BY: C. HENEGAR
 DATE: AUGUST 2024

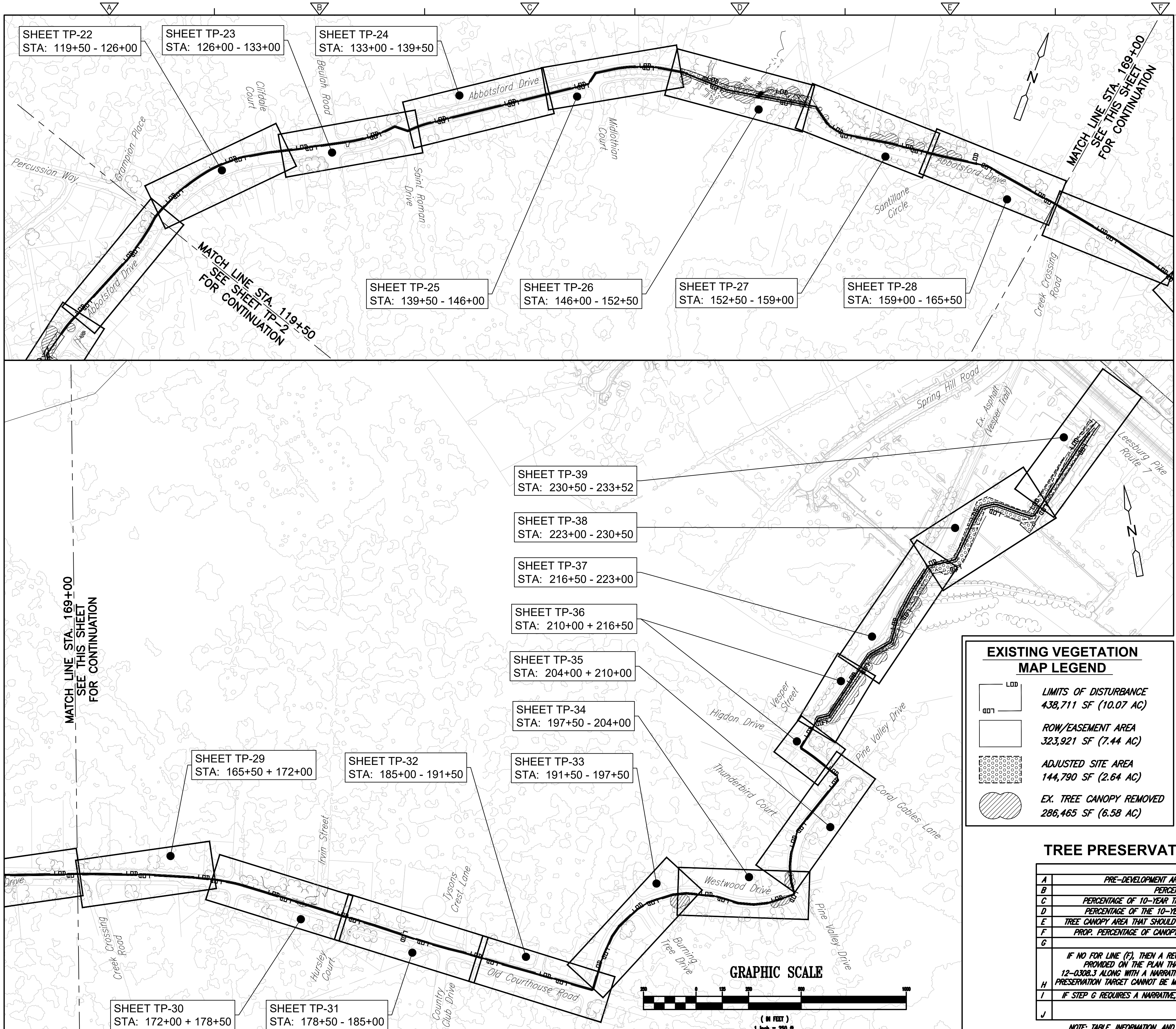
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FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

PROJECT NO. 5003-244105
 FILE NAME: 01-03 TREE NOTE
 SHEET NO. **TP-2**

TREE PRESERVATION AND PLANTING PLAN
EXISTING VEGETATION AND INDEX MAP



10-YEAR TREE CANOPY CALCULATION WORKSHEET

STEP	TOTALS	REFERENCE
A. TREE PRESERVATION TARGET AND STATEMENT		
A1	PLACE THE TREE PRESERVATION TARGET CALCULATIONS AND STATEMENT HERE PRECEDING THE 10-YEAR TREE CANOPY CALCULATIONS	SEE THIS SHEET SEE SEC. 12-0308.2 FOR LIST OF REQUIRED ELEMENTS AND WORKSHEET
B. TREE CANOPY REQUIREMENT		
B1	IDENTIFY GROSS SITE AREA = 10.07 ACRES	SEC. 12-0311.1A
B2	SUBTRACT AREA DEDICATED TO PARKS, ROAD FRONTAGE, AND = 0.00 ACRES	SEC. 12-0311.1B
B3	SUBTRACT AREA OF EXEMPTIONS = 7.44 ACRES	SEC. 12-0311.1(1) - SEC. 12-0311.1(6)
B4	ADJUSTED SITE AREA (B1 - B2 - B3) = 2.64 ACRES	
B5	IDENTIFY SITE'S ZONING AND/OR USE R1, R2, R3	RESIDENTIAL
B6	PERCENTAGE OF 10-YEAR TREE CANOPY REQUIRED = 30%	SEC. 12-0310.1 AND TABLE 12.4
B7	AREA OF 10-YEAR CANOPY REQUIRED (B4 x B6) = 0.79 ACRES	2.64 x 30%
B8	MODIFICATION OF 10-YEAR TREE CANOPY REQUIREMENTS REQUESTED? NO	YES OR NO
B9	IF B8 IS YES, THEN LIST SHEET WHERE MODIFICATION REQUEST IS LOCATED	N/A SHEET NUMBER OR N/A
C. TREE PRESERVATION		
C1	TREE PRESERVATION TARGET AREA = 0.00 ACRES	
C2	TOTAL CANOPY AREA MEETING STANDARDS OF SEC. 12-0200 = 0 ACRES	
C3	C2 x 1.25 = 0 ACRES	SEC. 12-0310.3B
C4	TOTAL CANOPY AREA PROVIDED BY UNIQUE OR VALUABLE FOREST OR WOODLAND COMMUNITIES = 0 ACRES	
C5	C4 x 1.5 = 0 ACRES	SEC. 12-0310.3B(1)
C6	TOTAL OF CANOPY AREA PROVIDED BY "HERITAGE," "MEMORIAL," "SPECIMEN," OR "STREET" TREES = 0 ACRES	
C7	C6 x 1.5 TO 3.0 = 0 ACRES	SEC. 12-0310.3B(2)
C8	CANOPY AREA OF TREES WITHIN RPA'S AND 100-YR FLOODPLAINS = 0 ACRES	
C9	C8 x 1.0 = 0 ACRES	SEC. 12-0310.3C(1)
C10	TOTALS OF C3, C5, C7, AND C9 = 0 ACRES	IF AREA OF C10 IS LESS THAN B7 REMAINDER OF REQUIREMENT MUST BE MET THROUGH TREE PLANTING - GO TO D
D. TREE PLANTING		
D1	AREA OF CANOPY TO BE MET THROUGH TREE PLANTING (B7 - C10) = 34,413 S.F.	0.79 ACRES x 43,560
D2	AREA OF CANOPY PLANTED FOR AIR QUALITY BENEFITS = 0 S.F.	
D3	x 1.5 = 0 S.F.	SEC. 12-0310.4B(1)
D4	AREA OF CANOPY PLANTED FOR ENERGY CONSERVATION = 0 S.F.	
D5	x 1.5 = 0 S.F.	SEC. 12-0310.4B(2)
D6	AREA OF CANOPY PLANTED FOR WATER QUALITY BENEFITS = 0 S.F.	
D7	x 1.25 = 0 S.F.	SEC. 12-0310.4B(3)
D8	AREA OF CANOPY PLANTED FOR WILDLIFE BENEFITS = 0 S.F.	
D9	x 1.5 = 0 S.F.	SEC. 12-0310.4B(4)
D10	AREA OF CANOPY PROVIDED BY NATIVE TREES = 0 S.F.	
D11	x 1.5 = 0 S.F.	SEC. 12-0310.4B(5)
D12	AREA OF CANOPY PROVIDED BY IMPROVED CULTIVARS & VARIETIES = 0 S.F.	
D13	x 1.25 = 0 S.F.	SEC. 12-0310.4B(6)
D14	AREA OF CANOPY PROVIDED THROUGH TREE SEEDLINGS = 0 S.F.	
D15	AREA OF CANOPY PROVIDED THROUGH NATIVE SHRUBS OR WOODY SEED MIX = 0 S.F.	
D16	x 1.0 = 0 S.F.	SEC. 12-0310.4D(1)(g)
D17	PERCENTAGE OF D14 REPRESENTED BY D15 = 0 %	MUST NOT EXCEED 33% OF D14
D18	TOTAL OF CANOPY AREA PROVIDED THROUGH TREE PLANTING (D17) = 56,600 S.F.	288 TREES (NOTE 2)
D19	IS AN OFFSITE PLANTING RELIEF REQUESTED? NO	YES OR NO
D20	TREE BANK OR TREE FUND? N/A	SEC. 12-0312
D21	CANOPY AREA REQUESTED TO BE PROVIDED THROUGH OFFSITE BANKING OR TREE FUND = N/A	
D22	AMOUNT TO BE DEPOSITED INTO THE TREE PRESERVATION AND PLANTING FUND = N/A	
E. TOTAL OF 10-YEAR TREE CANOPY PROVIDED		
E1	TOTAL OF CANOPY AREA PROVIDED THROUGH TREE PRESERVATION (C10) = 0 S.F.	
E2	TOTAL OF CANOPY AREA PROVIDED THROUGH TREE PLANTING (D17) = 56,600 S.F.	
E3	TOTAL OF CANOPY AREA PROVIDED THROUGH OFFSITE MECHANISM (D19) = 0 S.F.	
E4	TOTAL OF 10-YEAR TREE CANOPY PROVIDED = 56,600 S.F. (1.30 ACRES)	TOTAL OF E1 THROUGH E3 AREA SHOULD MEET OR EXCEED AREA IN B7

NOTES:
 1. TABLE, INFORMATION, AND CALCULATIONS PROVIDED ARE IN ACCORDANCE WITH PFM SECTION 12-0311.1(1) AND TABLE 12.9.
 2. PROPOSED PLANTING WILL BE PROVIDED. FOR EACH TREE REMOVED, ONE NURSERY STOCK SIZE TREE 1 INCH CALIPER SHALL BE PROVIDED. SEE PROPOSED PLANTING TABLE ON SHEET TP-1.

EXISTING VEGETATION MAP LEGEND

- LDD LIMITS OF DISTURBANCE 438,711 SF (10.07 AC)
- ROW/EASEMENT AREA 323,921 SF (7.44 AC)
- ADJUSTED SITE AREA 144,790 SF (2.64 AC)
- EX. TREE CANOPY REMOVED 286,465 SF (6.58 AC)

TREE PRESERVATION TARGET CALCULATIONS AND STATEMENT

	NOTES
A	PRE-DEVELOPMENT AREA OF EXISTING TREE CANOPY (FROM EXISTING VEGETATION MAP) = 6.58 ACRES
B	PERCENTAGE OF GROSS SITE AREA COVERED BY EXISTING TREE CANOPY = 65% (6.58/10.07)
C	PERCENTAGE OF 10-YEAR TREE CANOPY REQUIRED FOR SITE (PER TABLE 12.4 OF THE PFM) = 30% (R1, R2, R3)
D	PERCENTAGE OF THE 10-YEAR CANOPY THAT SHOULD BE MET THROUGH TREE PRESERVATION = 30% SAME AS LINE C
E	TREE CANOPY AREA THAT SHOULD BE MET THROUGH TREE PRESERVATION (TREE PRESERVATION TARGET) = 1.97 ACRES 6.58 x 30%
F	PROP. PERCENTAGE OF CANOPY REQUIREMENT THAT WILL BE MET THROUGH TREE PRESERVATION = OR
G	HAS THE TREE PRESERVATION TARGET BEEN MET? YES
H	IF NO FOR LINE (F), THEN A REQUEST TO DEVIATE FROM THE TREE PRESERVATION TARGET SHALL BE PROVIDED ON THE PLAN THAT STATES ONE OR MORE OF THE JUSTIFICATIONS LISTED IN SECTION 12-0308.3 ALONG WITH A NARRATIVE THAT PROVIDES A SITE-SPECIFIC EXPLANATION OF WHY THE TREE PRESERVATION TARGET CANNOT BE MET. PROVIDE SHEET NUMBER WHERE DEVIATION REQUEST IS LOCATED. N/A
I	IF STEP G REQUIRES A NARRATIVE, IT SHALL BE PREPARED IN ACCORDANCE WITH SECTION 12-0308.4 N/A
J	PLACE THIS INFORMATION PRIOR TO THE 10-YEAR TREE CANOPY CALCULATIONS AS PER INSTRUCTIONS IN TABLE 12.10. SEE TREE CANOPY CALCS

NOTE: TABLE, INFORMATION, AND CALCULATIONS PROVIDED ARE IN ACCORDANCE WITH PFM SECTION 12-0308 AND TABLE 12.3.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
 SHEET CHK'D BY: A. YEAGLE
 CROSS CHK'D BY: C. HENEGAR
 APPROVED BY: C. HENEGAR
 DATE: AUGUST 2024

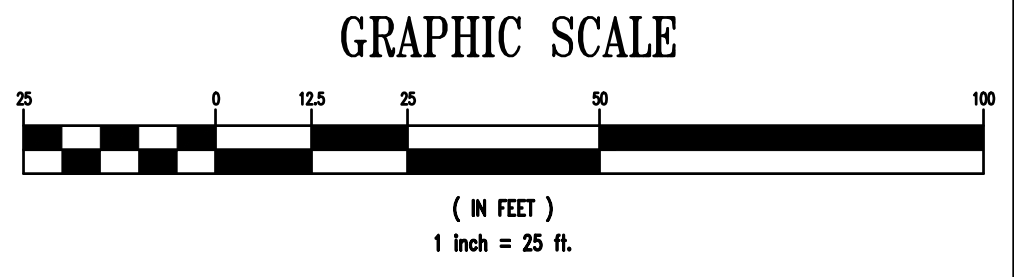
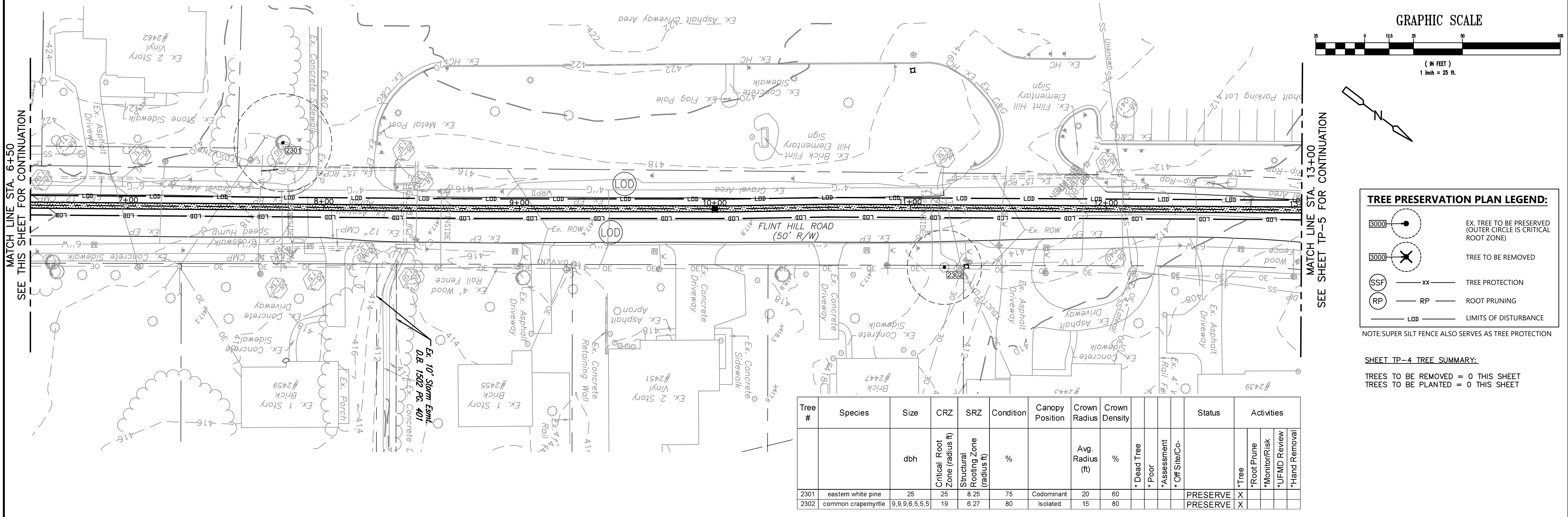
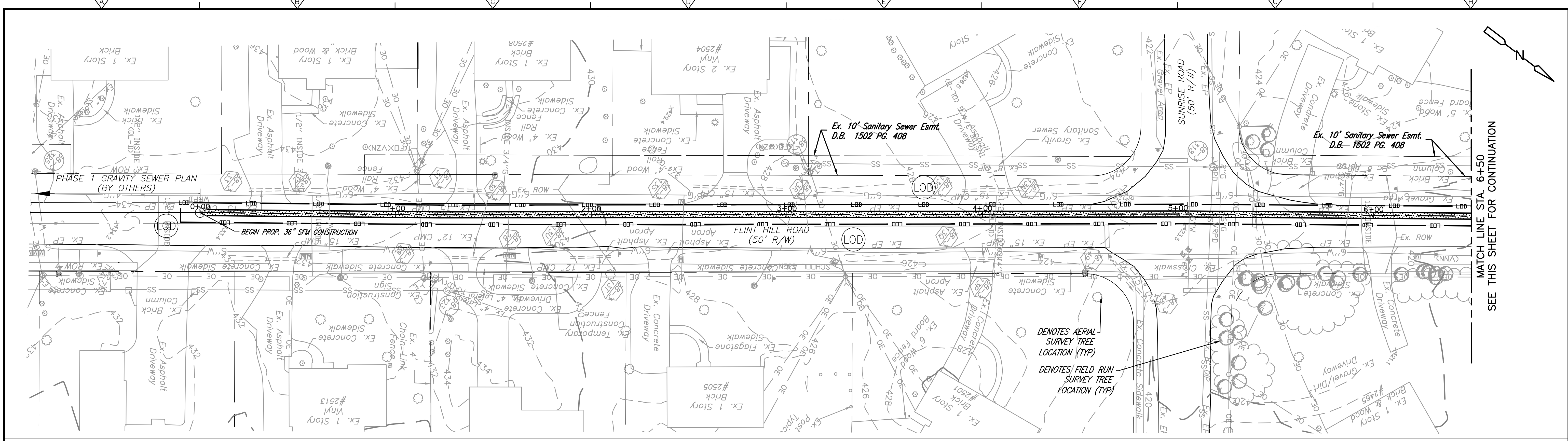
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FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

TREE PRESERVATION AND PLANTING PLAN
 EXISTING VEGETATION AND INDEX MAP

PROJECT NO. 5003-244105
 FILE NAME: 01-03 TREE NOTE
 SHEET NO. TP-3



TREE PRESERVATION PLAN LEGEND:

- EX. TREE TO BE PRESERVED (OUTER CIRCLE IS CRITICAL ROOT ZONE)
- TREE TO BE REMOVED
- TREE PROTECTION
- ROOT PRUNING
- LIMITS OF DISTURBANCE

NOTE: SUPER SILT FENCE ALSO SERVES AS TREE PROTECTION

SHEET TP-4 TREE SUMMARY:
 TREES TO BE REMOVED = 0 THIS SHEET
 TREES TO BE PLANTED = 0 THIS SHEET

Tree #	Species	Size	CRZ	SRZ	Condition	Canopy Position	Crown Radius	Crown Density	Status	Activities									
										dbh	Critical Root Zone (radius ft)	Structural Rooting Zone (radius ft)	%	Avg. Radius (ft)	%	Dead Tree	Poor	Assessment	Off Site/Co-
2301	eastern white pine	25	25	8.25	75	Codominant	20	60	PRESERVE	X									
2302	common crapemyrtle	9,9,9,6,5,5,5	19	6.27	80	Isolated	15	80	PRESERVE	X									

REV. NO.	DATE	DRWN	CHKD	REMARKS

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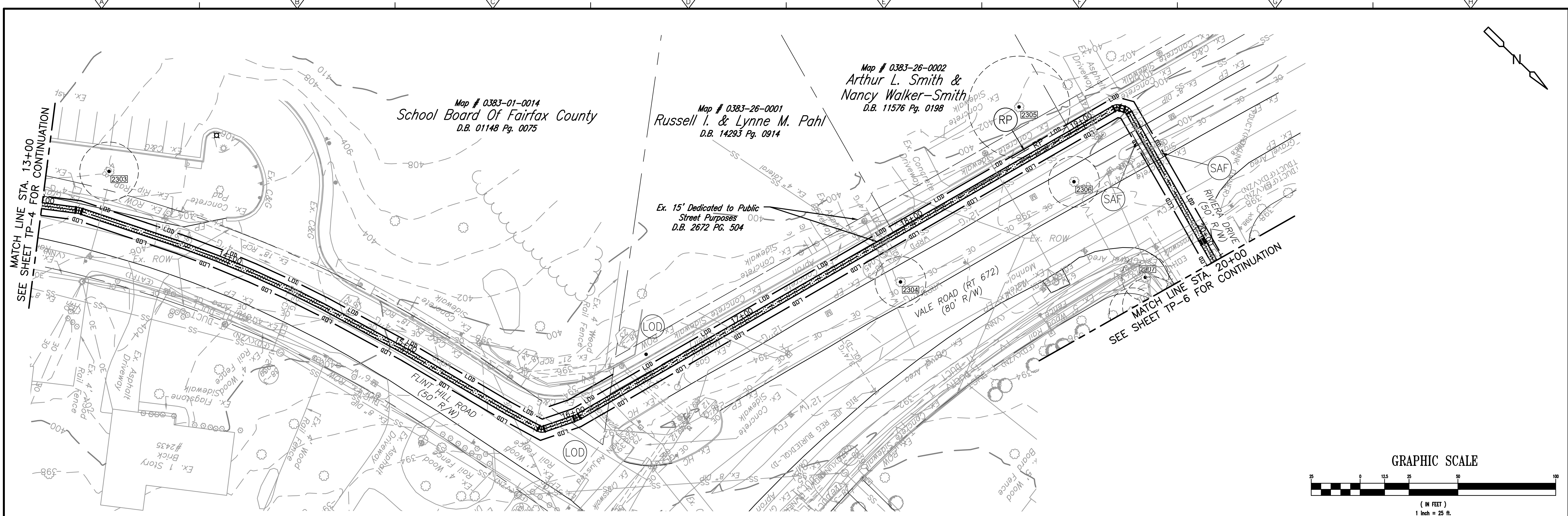
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 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

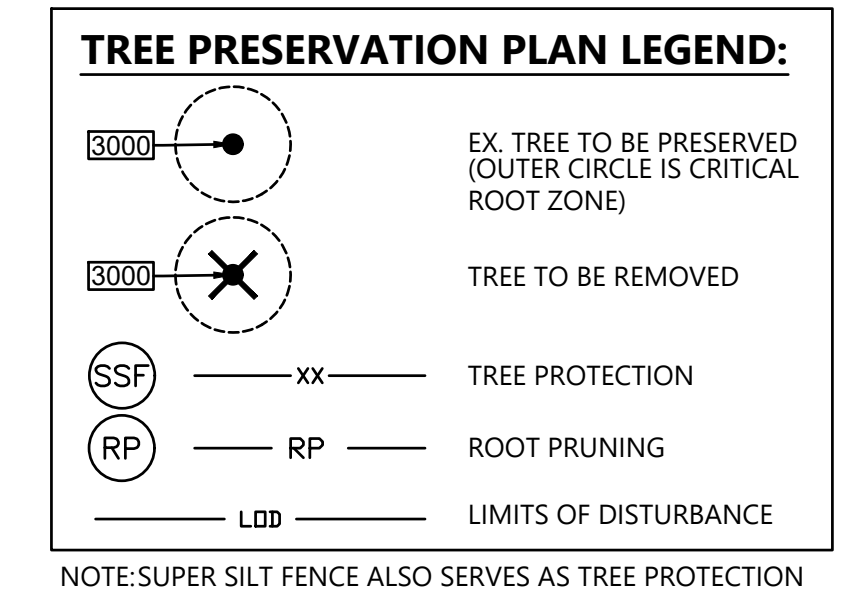
TREE PRESERVATION
 AND PLANTING PLAN
 STA 0+00 TO STA 13+00
 TP-4

PROJECT NO. 5003-244105
 FILE NAME: 04-12 TREE PRES
 SHEET NO. TP-4



Tree #	Species	Size	CRZ	SRZ	Condition	Canopy Position	Crown Radius	Crown Density	Status	Activities								
										Critical Root Zone (radius ft)	Structural Rooting Zone (radius ft)	%	Avg. Radius (ft)	%	* Dead Tree	* Poor	* Assessment	* Off Site/Co-
2303	Norway maple	12,9	15	4.95	80	Isolated	15	80	PRESERVE	X								
2304	white mulberry	13	13	4.29	65	Codominant	20	70	PRESERVE	X								
2305	maple species	26	26	8.58	75	Codominant	25	80	PRESERVE	X	X							
2306	white mulberry	11,7	13	4.29	60	Isolated	15	60	PRESERVE	X								
2307	white mulberry	10,7	12	3.96	65	Codominant	15	70	PRESERVE	X								

SHEET TP-5 TREE SUMMARY:
TREES TO BE REMOVED = 0 THIS SHEET
TREES TO BE PLANTED = 0 THIS SHEET



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
DRAWN BY: A. NGUYEN
SHEET CHK'D BY: A. YEAGLE
CROSS CHK'D BY: C. HENEGAR
APPROVED BY: C. HENEGAR
DATE: AUGUST 2024

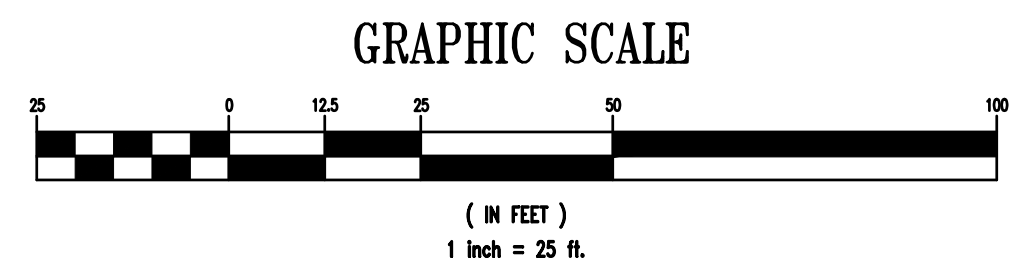
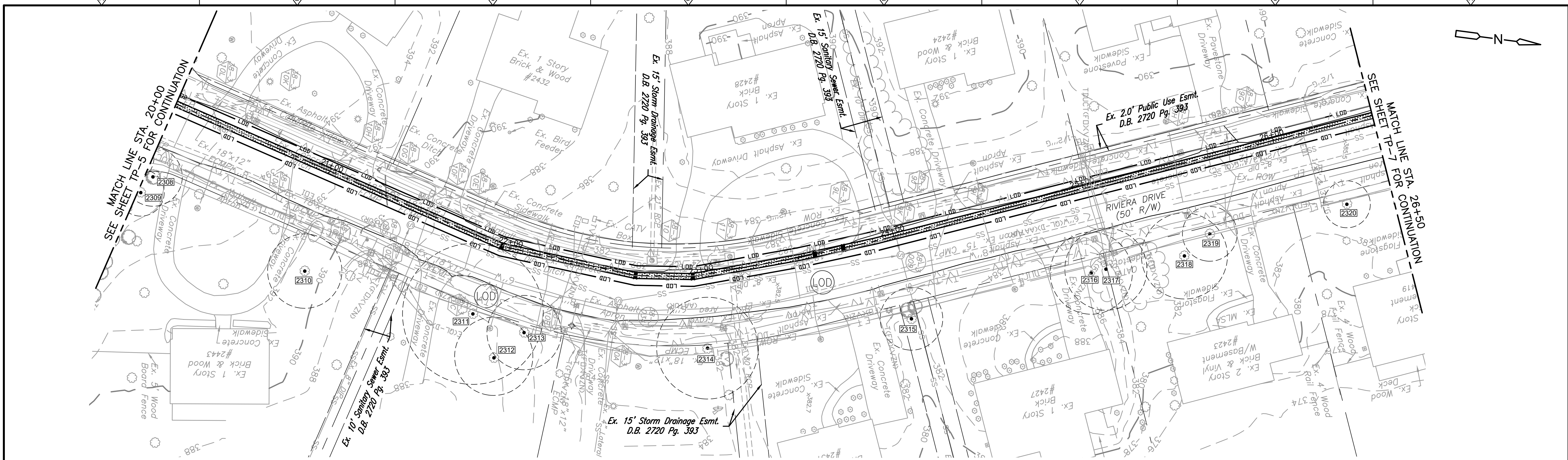
CDM Smith
10306 Eaton Place, Suite 500
Fairfax, VA 22030
Tel: (703) 691-6500

rda
RINKER DESIGN ASSOC.
11100 Endeavor Court
Suite 200
Manassas, VA 20109

FAIRFAX COUNTY, VIRGINIA
DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
TYSONS WASTEWATER CONVEYANCE SYSTEM
MODIFICATIONS
PACKAGE 4: FORCE MAIN

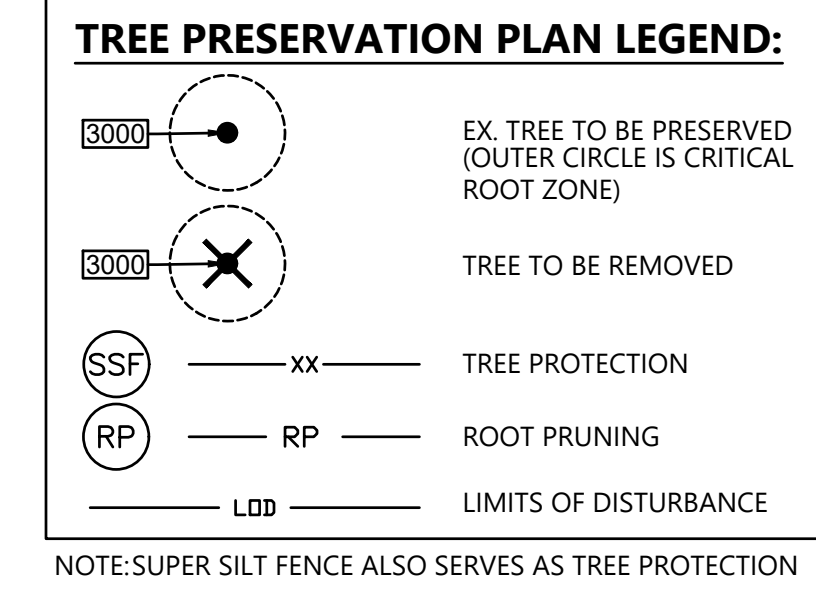
TREE PRESERVATION AND PLANTING PLAN
STA 13+00 TO STA 20+00

PROJECT NO. 5003-244105
FILE NAME: 04-12 TREE PRES
SHEET NO.
TP-5



Tree #	Species	Size dbh	CRZ Critical Root Zone (radius ft)	SRZ Structural Rooting Zone (radius ft)	Condition %	Canopy Position	Crown Radius Avg. Radius (ft)	Crown Density %	Dead Tree	Poor	Assessment	Off Site/Co.	Status	Activities			
														*Tree	*Root Prune	*Monitor/Risk	*UFMD Review
2308	flowering cherry	15	15	4.95	75	Codominant	20	70					PRESERVE	X			
2309	sassafras	12	12	3.96	70	Codominant	10	50					PRESERVE	X			
2310	magnolia	12,9,8,8	19	6.27	80	Isolated	20	80					PRESERVE	X			
2311	red maple	36	36	11.88	70	Codominant	30	80					PRESERVE	X			
2312	flowering cherry	20	20	6.6	75	Codominant	20	70					PRESERVE	X			
2313	red maple	19	19	6.27	75	Codominant	20	70					PRESERVE	X			
2314	tulip tree	26	26	8.58	85	Codominant	30	80					PRESERVE	X			
2315	white mulberry	13,9	16	5.28	75	Isolated	20	70					PRESERVE	X			
2316	Norway maple	21	21	6.93	75	Codominant	20	70					PRESERVE	X			
2317	Norway spruce	21	21	6.93	80	Codominant	15	70					PRESERVE	X			
2318	red maple	22	22	7.26	80	Codominant	25	80					PRESERVE	X			
2319	Norway spruce	14	14	4.62	80	Codominant	15	80					PRESERVE	X			
2320	flowering cherry	12	12	3.96	75	Isolated	20	80					PRESERVE	X			

SHEET TP-6 TREE SUMMARY:
 TREES TO BE REMOVED = 0 THIS SHEET
 TREES TO BE PLANTED = 0 THIS SHEET



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
 SHEET CHK'D BY: A. YEAGLE
 CROSS CHK'D BY: C. HENEGAR
 APPROVED BY: C. HENEGAR
 DATE: AUGUST 2024

CDM Smith
 10306 Eaton Place, Suite 500
 Fairfax, VA 22030
 Tel: (703) 691-6500

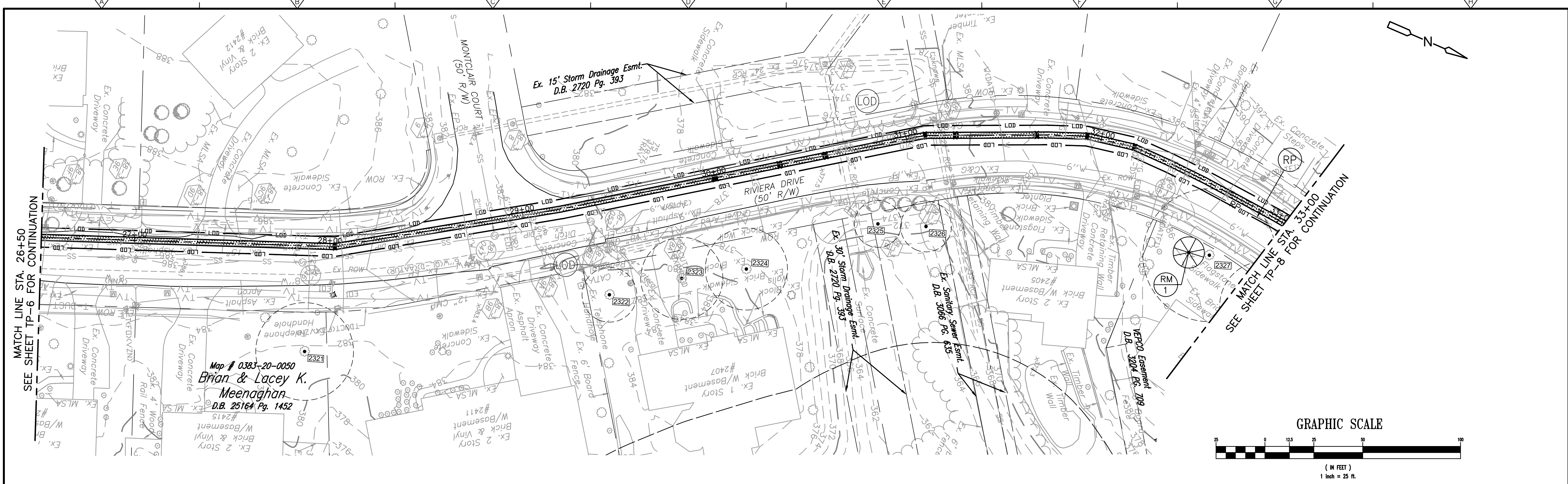
rd
 RINKER DESIGN ASSOC.
 11100 Endeavor Court
 Suite 200
 Manassas, VA 20109

FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

TREE PRESERVATION AND PLANTING PLAN
 STA 20+00 TO STA 26+50

SHEET NO. TP-6

PROJECT NO. 5003-244105
 FILE NAME:04-12 TREE PRES
 SHEET NO. TP-6



Tree #	Species	Size	CRZ	SRZ	Condition	Canopy Position	Crown Radius	Crown Density	Status	Activities									
										dbh	Critical Root Zone (radius ft)	Structural Rooting Zone (radius ft)	%	Dead Tree	Poor	Assessment	Off Site/Co-	*Tree	*Root Prune
2321	red maple	25	25	8.25	80	Isolated	30	80	PRESERVE	X									
2322	red maple	14	14	4.62	70	Codominant	15	80	PRESERVE	X									
2323	red maple	21	21	6.93	60	Codominant	20	60	PRESERVE	X									
2324	Norway maple	15,15	21	6.93	80	Codominant	20	80	PRESERVE	X									
2325	arborvitae	12	12	3.96	75	Cluster	10	70	PRESERVE	X									
2326	arborvitae	13	13	4.29	80	Cluster	15	80	PRESERVE	X									
2327	red maple	34	34	11.22	75	Codominant	30	70	PRESERVE	X									

SHEET TP-7 TREE SUMMARY:

TREES TO BE REMOVED = 0 THIS SHEET
 TREES TO BE PLANTED = 0 THIS SHEET

NOTE: PROPOSED TREE PLANTING SHALL BE DIRECTED AND APPROVED BY FAIRFAX COUNTY.

TREE PRESERVATION PLAN LEGEND:

- EX. TREE TO BE PRESERVED (OUTER CIRCLE IS CRITICAL ROOT ZONE)
- TREE TO BE REMOVED
- TREE PROTECTION
- ROOT PRUNING
- LIMITS OF DISTURBANCE

NOTE: SUPER SILT FENCE ALSO SERVES AS TREE PROTECTION

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
 SHEET CHK'D BY: A. YEAGLE
 CROSS CHK'D BY: C. HENEGAR
 APPROVED BY: C. HENEGAR
 DATE: AUGUST 2024

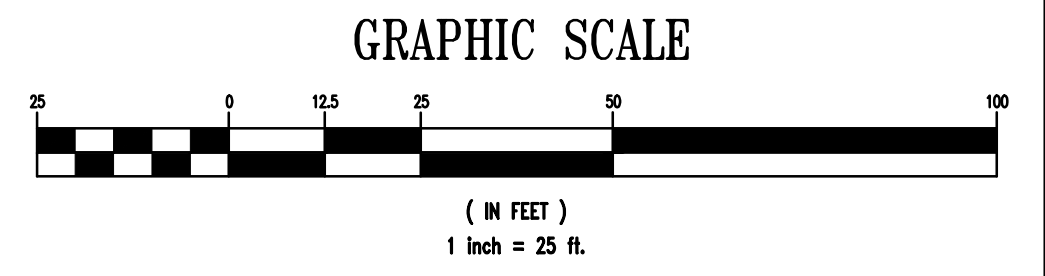
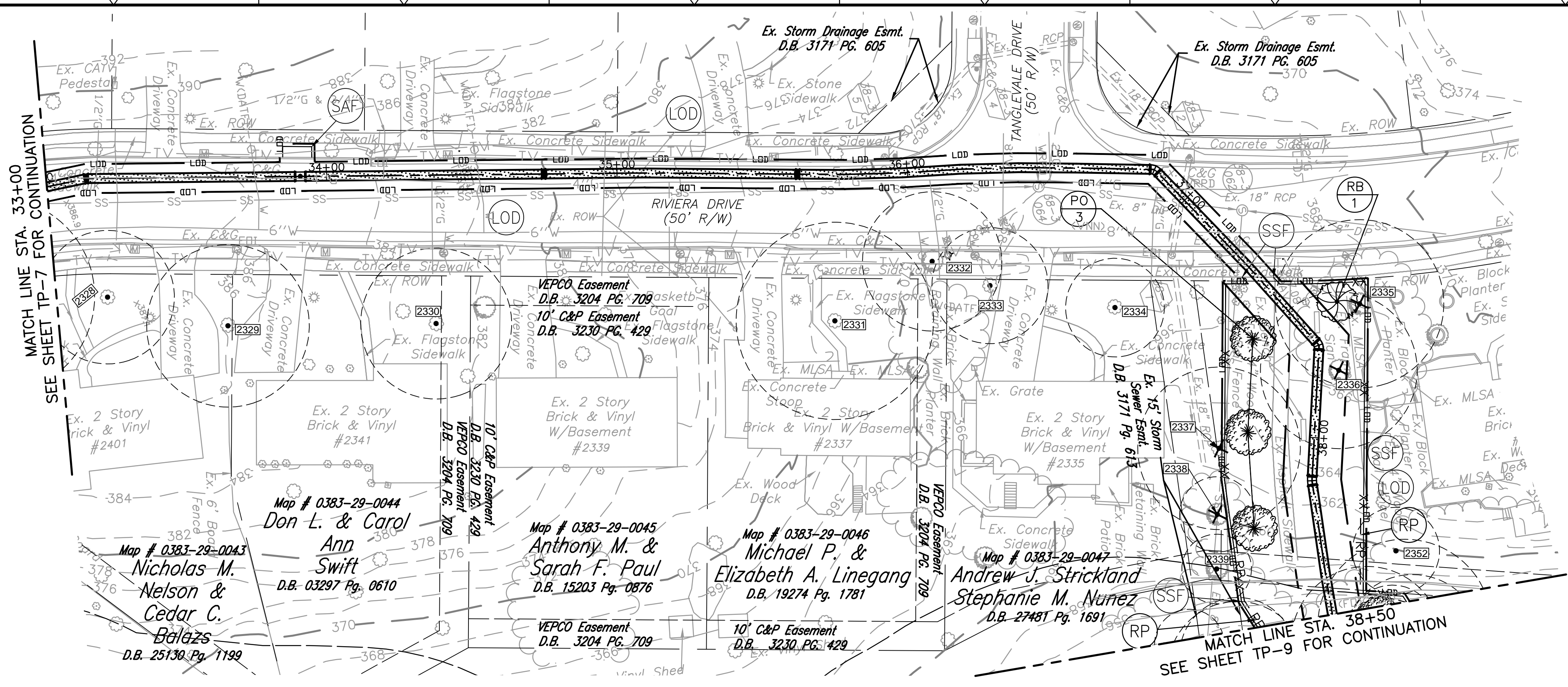
CDM Smith
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 Fairfax, VA 22030
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rd
 RINKER DESIGN ASSOC.
 11100 Endeavor Court
 Suite 200
 Manassas, VA 20109

FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

TREE PRESERVATION AND PLANTING PLAN
 STA 26+50 TO STA 33+00
 TP-7

PROJECT NO. 5003-244105
 FILE NAME:04-12 TREE PRES
 SHEET NO. TP-7



Tree #	Species	Size	CRZ	SRZ	Condition	Canopy Position	Crown Radius	Crown Density	Status	Activities							
										dbm	dbh	Dead Tree	Poor	Assessment	Off Site/Co-	Tree	Root Prune
2328	red maple	23	23	7.59	80	Codominant	25	80	PRESERVE	X							
2329	red maple	23.16	28	9.24	75	Codominant	25	80	PRESERVE	X							
2330	red maple	26	26	8.58	75	Codominant	30	80	PRESERVE	X							
2331	red maple	34	34	11.22	75	Codominant	30	80	PRESERVE	X							
2332	flowering cherry	24	24	7.92	60	Intermediate	15	60	PRESERVE	X							
2333	sweetgum	20	20	6.6	75	Codominant	20	80	PRESERVE	X							
2334	red maple	17	17	5.61	75	Isolated	20	80	PRESERVE	X							
2335	red maple	20,18,12	29	9.57	75	Codominant	25	70	REMOVE								X
2336	eastern white pine	27	27	8.91	75	Codominant	20	80	REMOVE								X
2337	black walnut	28	28	9.24	80	Codominant	35	80	REMOVE								X
2338	American holly	13	13	4.29	80	Intermediate	10	80	REMOVE								X
2339	American holly	12	12	3.96	75	Intermediate	10	70	PRESERVE	X	X						
2352	red maple	15	15	4.95	75	Codominant	20	60	PRESERVE	X							

SYM.	ABBV.	QUAN.	COMMON NAME	BOTANICAL NAME	SIZE	ROOT
	RB	1	RIVER BIRCH	BETULA NIGRA	1" CAL.	B & B
	PO	3	PIN OAK	QUERCUS PALUSTRIS	1" CAL.	B & B

SEE SHEET TP-1 FOR FULL LIST OF PROPOSED PLANTINGS.

SHEET TP-8 TREE SUMMARY:

TREES TO BE REMOVED = 4 THIS SHEET
 TREES TO BE PLANTED = 4 THIS SHEET

NOTE: PROPOSED TREE PLANTING SHALL BE DIRECTED AND APPROVED BY FAIRFAX COUNTY.

TREE PRESERVATION PLAN LEGEND:

- EX. TREE TO BE PRESERVED (OUTER CIRCLE IS CRITICAL ROOT ZONE)
- TREE TO BE REMOVED
- TREE PROTECTION
- ROOT PRUNING
- LIMITS OF DISTURBANCE

NOTE: SUPER SILT FENCE ALSO SERVES AS TREE PROTECTION

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
 SHEET CHK'D BY: A. YEAGLE
 CROSS CHK'D BY: C. HENEGAR
 APPROVED BY: C. HENEGAR
 DATE: AUGUST 2024

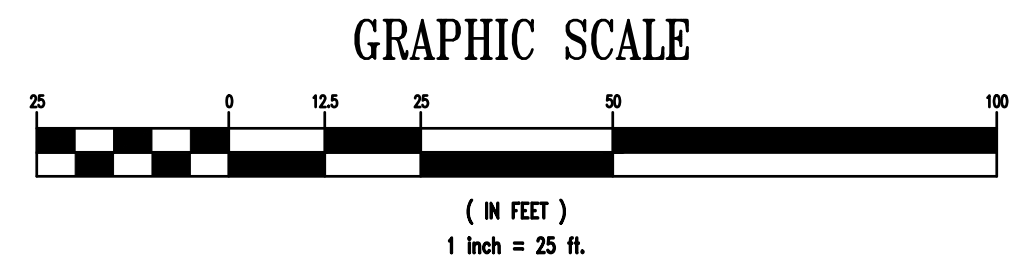
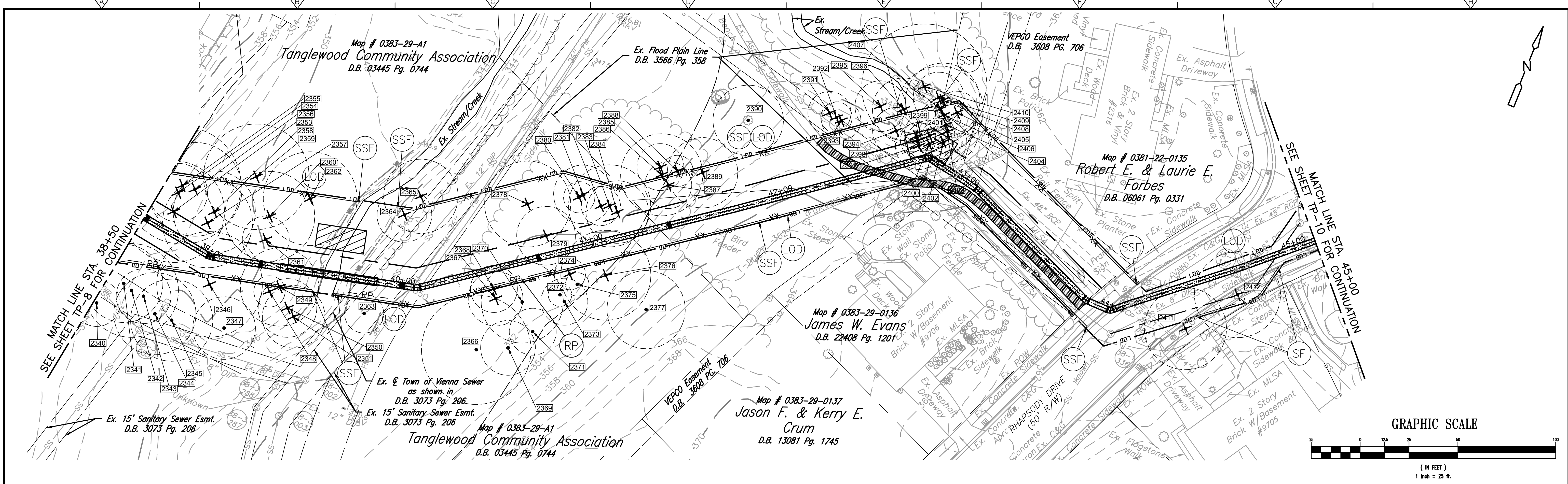
10306 Eaton Place, Suite 500
 Fairfax, VA 22030
 Tel: (703) 691-6500

11102 Endeavor Court
 Suite 200
 Manassas, VA 20109

FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

TREE PRESERVATION AND PLANTING PLAN
 STA 33+00 TO STA 38+50
 TP-8

PROJECT NO. 5003-244105
FILE NAME:04-12 TREE PRES
SHEET NO. TP-8



Tree #	Species	Size dbh	CRZ	SRZ	Condition %	Canopy Position	Crown Radius Avg. Radius (ft)	Crown Density %	*Dead Tree	*Poor	*Assessment	*Off Site/Co-	Status	Activities				
														*Tree	*Root Prune	*Monitor/Risk	*UFMD Review	
2340	American holly	12	12	3.96	75	Intermediate	10	60					PRESERVE	X				
2341	tulip tree	20	20	6.6	70	Codominant	20	30					PRESERVE	X	X			
2342	tulip tree	24	24	7.92	70	Intermediate	25	60					PRESERVE	X				
2343	tulip tree	14	14	4.62	75	Codominant	15	70					PRESERVE	X				
2344	tulip tree	21	21	6.93	60	Codominant	15	30					PRESERVE					
2345	tulip tree	21	21	6.93	65	Codominant	15	70					PRESERVE					
2346	red maple	27	27	8.91	70	Codominant	20	40					REMOVE					
2347	black locust	16	16	5.28	65	Codominant	15	30					PRESERVE					
2348	tulip tree	8	8	2.64	80	Intermediate	10	80					REMOVE					
2349	tulip tree	20	20	6.6	75	Codominant	20	60					REMOVE					
2350	red maple	15			0				X				REMOVE					
2351	red maple	16	16	5.28	40	Codominant	15	20		X			REMOVE					
2353	tulip tree	26	26	8.98	75		20	40					REMOVE					X
2354	tulip tree	15	15	4.95	70	Codominant	15	30					REMOVE					
2355	tulip tree	30	30	9.9	75	Codominant	25	60					REMOVE					
2356	tulip tree	24	24	7.92	75	Codominant	20	60					REMOVE					
2357	tulip tree	23	23	7.59	80	Codominant	25	60					REMOVE					
2358	tulip tree	21	21	6.93	75	Codominant	20	60					REMOVE					X
2359	tulip tree	27	27	8.91	80	Codominant	25	70					REMOVE					
2360	tulip tree	23	23	7.59	75	Codominant	20	50					REMOVE					
2361	American beech	12	12	3.96	80	Intermediate	15	70					REMOVE					X
2362	tulip tree	24	24	7.92	75	Codominant	20	60					REMOVE					
2363	tulip tree	10	10	3.3	75	Codominant	15	70					PRESERVE	X				
2364	tulip tree	14	14	4.62	75	Codominant	20	70					REMOVE					
2365	tulip tree	19	19	6.27	70	Codominant	20	60					REMOVE					
2366	white oak	28	28	9.24	80	Codominant	35	70					PRESERVE	X				
2367	red maple	14	14	4.62	75	Codominant	15	70					REMOVE					
2368	black oak	12			0				X				REMOVE					
2369	red maple	14	14	4.62	65	Codominant	15	50					PRESERVE	X				
2370	northern red oak	21	21	6.93	70	Codominant	25	70					PRESERVE	X	X			
2371	red maple	12	12	3.96	75	Codominant	15	70					PRESERVE	X				
2372	blackgum	6	6	1.98	50	Intermediate	5	30					PRESERVE	X				
2373	blackgum	12	12	3.96	70	Codominant	15	50					PRESERVE	X				
2374	white oak	8	8	2.64	70	Codominant	10	60					REMOVE					
2375	sweet cherry	6	6	1.98	70	Codominant	10	60					PRESERVE	X				
2376	tulip tree	23	23	7.59	80	Codominant	25	60					REMOVE					

Tree #	Species	Size dbh	CRZ	SRZ	Condition %	Canopy Position	Crown Radius Avg. Radius (ft)	Crown Density %	*Dead Tree	*Poor	*Assessment	*Off Site/Co-	Status	Activities				
														*Tree	*Root Prune	*Monitor/Risk	*UFMD Review	
2377	red maple	20	20	6.6	75	Codominant	20	80					PRESERVE	X				
2378	white oak	22	22	7.26	70	Codominant	30	70					REMOVE					X
2379	red maple	15	15	4.95	80	Codominant	20	60					REMOVE					
2380	red maple	8	8	2.64	65	Codominant	15	20					REMOVE					
2381	tulip tree	15	15	4.95	75	Codominant	20	50					REMOVE					
2382	tulip tree	10	10	3.3	70	Codominant	15	20					REMOVE					
2383	tulip tree	21	21	6.93	70	Codominant	25	70					REMOVE					
2384	tulip tree	16	16	5.28	70	Codominant	20	50					REMOVE					
2385	red maple	12	12	3.96	75	Intermediate	15	50					REMOVE					
2386	white oak	21	21	6.93	60	Codominant	20	30					REMOVE				X	X
2387	white oak	12	12	3.96	65	Intermediate	15	40					REMOVE					X
2388	red maple	8	8	2.64	75	Intermediate	15	60					REMOVE					
2389	tree of heaven	18	18	5.94	70	Codominant	20	60					REMOVE					X
2390	tulip tree	18	18	5.94	70	Codominant	20	70					PRESERVE					
2391	red maple	11	11	3.63	50	Codominant	10	20					REMOVE					
2392	red maple	8	8	2.64	60	Codominant	10	40					REMOVE					
2393	red maple	10	10	3.3	75	Codominant	15	60					REMOVE					
2394	red maple	12	12	3.96	70	Codominant	15	50					REMOVE					X
2395	tulip tree	13	13	4.29	70	Codominant	10	50					REMOVE					
2396	tulip tree	16	16	5.28	70	Codominant	15	60					REMOVE					
2397	tulip tree	12	12	3.96	50	Codominant	5	10					REMOVE					
2398	red maple	9	9	2.97	75	Codominant	15	30					REMOVE					
2399	red maple	6	6	1.98	80	Intermediate	5	70					REMOVE					
2400	red maple	12	12	3.96	75	Codominant	15	30					REMOVE					
2401	tulip tree	13	13	4.29	75	Codominant	15	50					REMOVE					
2402	red maple	12	12	3.96	75	Codominant	15	30					REMOVE					
2403	tulip tree	16	16	5.28	70	Codominant	15	60					REMOVE					
2404	red maple	14	14	4.62	70	Codominant	20	50					REMOVE					X
2405	eastern hemlock	11	11	3.63	75	Codominant	15	50					REMOVE					
2406	red maple	9	9	2.97	60	Intermediate	10	70					REMOVE					
2407	tulip tree	22	22	7.26	70	Codominant	20	60					REMOVE					
2408	black cherry	15,12	19	6.27	50	Codominant	10	20					REMOVE					
2409	tulip tree	13	13	4.29	70	Codominant	20	30					REMOVE					
2410	tulip tree	32	32	10.56	75	Codominant	30	70					REMOVE					
2411	Callery pear	21	21	6.93	60	Codominant	15	70					REMOVE					
2412	Callery pear	22	22	7.26	60	Codominant	15	70					REMOVE					

SHEET TP-9 TREE SUMMARY:

TREES TO BE REMOVED = 55 THIS SHEET
 TREES TO BE PLANTED = 55 THIS SHEET

NOTE: PROPOSED TREE PLANTING SHALL BE DIRECTED AND APPROVED BY FAIRFAX COUNTY.

TREE PRESERVATION PLAN LEGEND:

- 3000 (circle with dot) EX. TREE TO BE PRESERVED (OUTER CIRCLE IS CRITICAL ROOT ZONE)
- 3000 (circle with X) TREE TO BE REMOVED
- SSF (line with xx) TREE PROTECTION
- RP (line) ROOT PRUNING
- LDD (line) LIMITS OF DISTURBANCE

NOTE: SUPER SILT FENCE ALSO SERVES AS TREE PROTECTION

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
 SHEET CHK'D BY: A. YEAGLE
 CROSS CHK'D BY: C. HENEGAR
 APPROVED BY: C. HENEGAR
 DATE: AUGUST 2024

CDM Smith
 10306 Eaton Place, Suite 500
 Fairfax, VA 22030
 Tel: (703) 691-6500

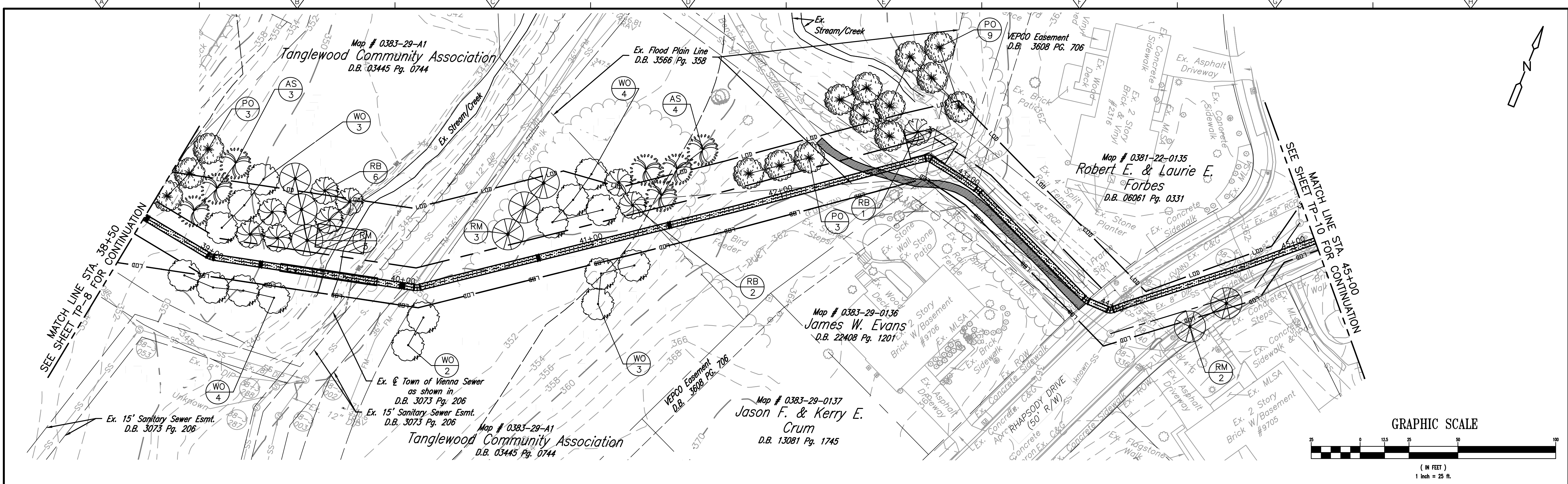
RDK
 RINKER DESIGN ASSOC.
 11109 Endeavor Court
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 Manassas, VA 20109

FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

PROJECT NO. 5003-244105
 FILE NAME:04-12 TREE PRES
 SHEET NO. TP-9

TREE PRESERVATION PLAN
 STA 38+50 TO STA 45+00

70% DESIGN SUBMITTAL - NOT FOR CONSTRUCTION



PROPOSED PLANT LIST						
SYM.	ABBV.	QUAN.	COMMON NAME	BOTANICAL NAME	SIZE	ROOT
	RB	9	RIVER BIRCH	BETULA NIGRA	1" CAL.	B & B
	AS	7	AMERICAN SYCAMORE	PLATANUS OCCIDENTALIS	1" CAL.	B & B
	PO	15	PIN OAK	QUERCUS PALUSTRIS	1" CAL.	B & B
	WO	16	WILLOW OAK	QUERCUS PHELLOS	1" CAL.	B & B
	RM	8	RED MAPLE	ACER RUBRUM	1" CAL.	B & B

SEE SHEET TP-1 FOR FULL LIST OF PROPOSED PLANTINGS.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
 SHEET CHK'D BY: A. YEAGLE
 CROSS CHK'D BY: C. HENEGAR
 APPROVED BY: C. HENEGAR
 DATE: AUGUST 2024

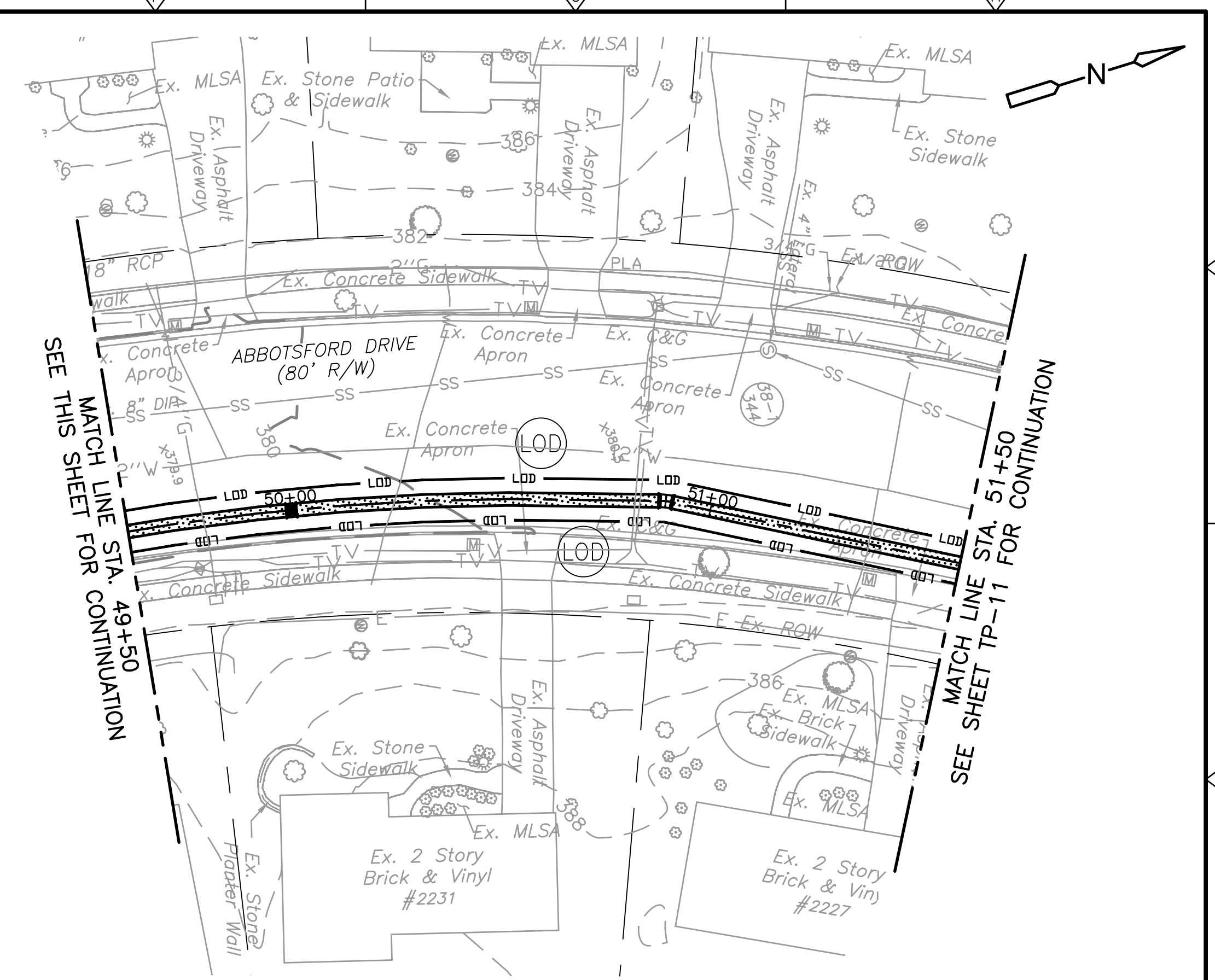
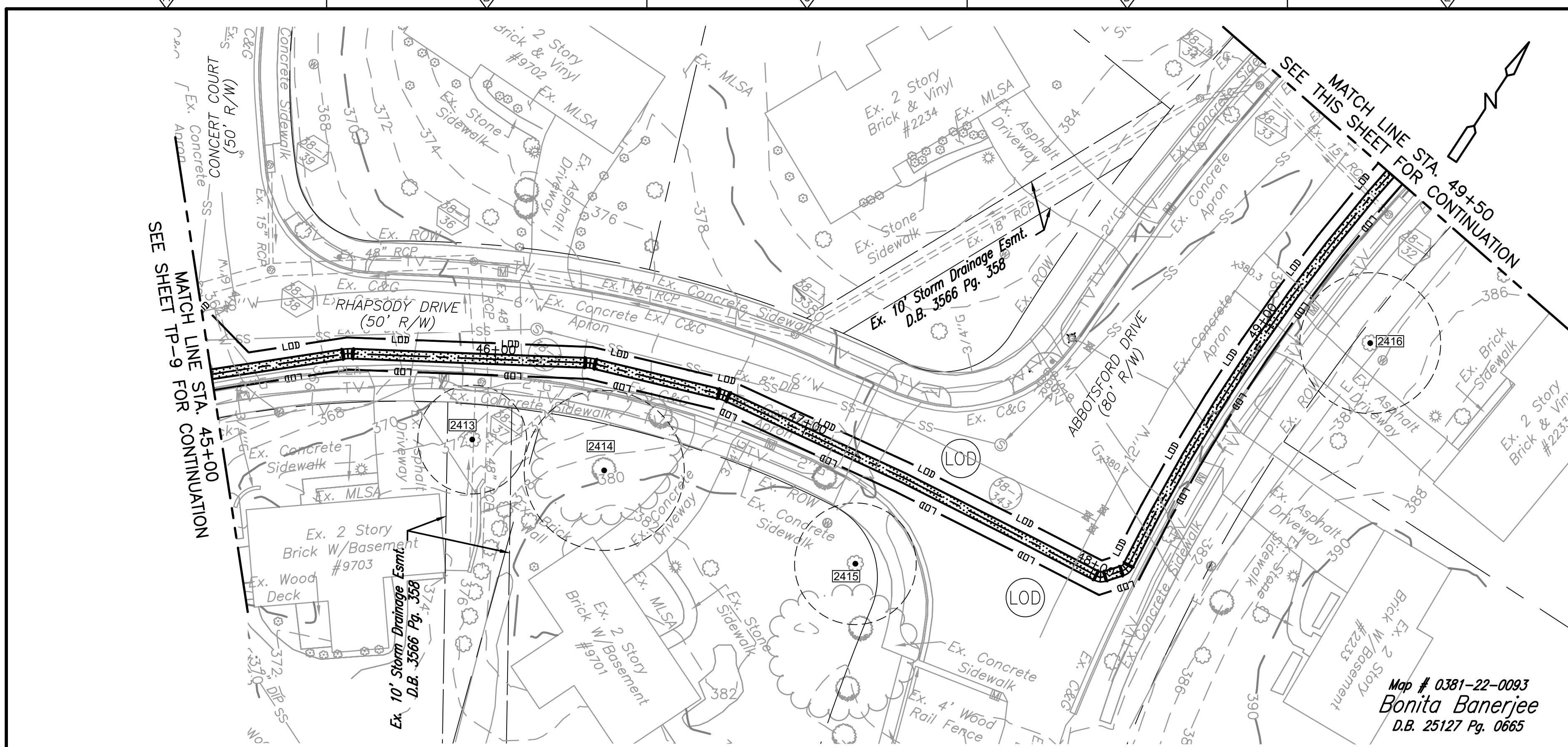
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FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

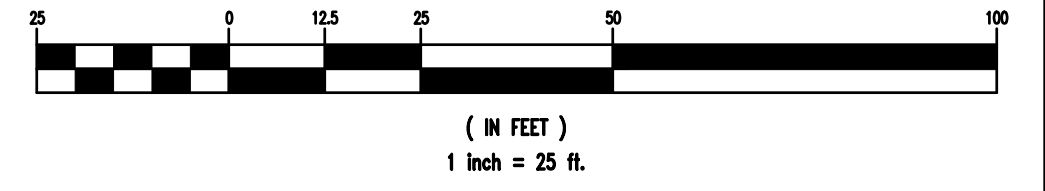
PROJECT NO. 5003-244105
 FILE NAME:04-12 TREE PRES
 SHEET NO.
TP-9A

PLANTING PLAN
 STA 38+50 TO STA 45+00



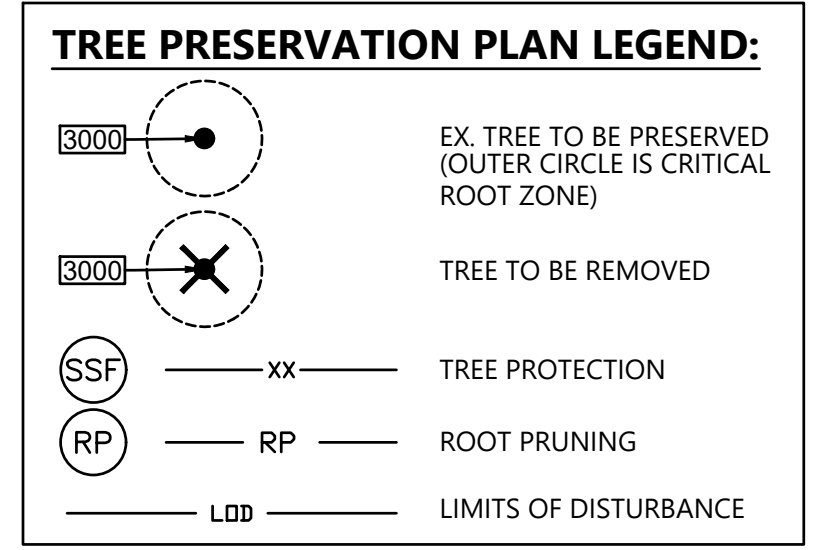
Map # 0381-22-0093
 Bonita Banerjee
 D.B. 25127 Pg. 0665

GRAPHIC SCALE



Tree #	Species	Size dbh	CRZ Critical Root Zone (radius ft)	SRZ Structural Rooting Zone (radius ft)	Condition %	Canopy Position	Crown Radius Avg. Radius (ft)	Crown Density %	*Dead Tree	*Poor	*Assessment	*Off Site/Co-	Status	Activities				
														*Tree	*Root Prune	*Monitor/Risk	*UFMD Review	*Hand Removal
2413	American holly	12,7,7,6	17	5.61	80	Codominant	15	80					PRESERVE	X				
2414	Japanese cryptomenia	25	25	8.25	85	Isolated	20	80					PRESERVE	X				
2415	American elm	19	19	6.27	75	Codominant	20	70					PRESERVE	X				
2416	Norway maple	22	22	7.26	75	Isolated	20	80					PRESERVE	X				

SHEET TP-10 TREE SUMMARY:
 TREES TO BE REMOVED = 0 THIS SHEET
 TREES TO BE PLANTED = 0 THIS SHEET



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
 SHEET CHK'D BY: A. YEAGLE
 CROSS CHK'D BY: C. HENEGAR
 APPROVED BY: C. HENEGAR
 DATE: AUGUST 2024

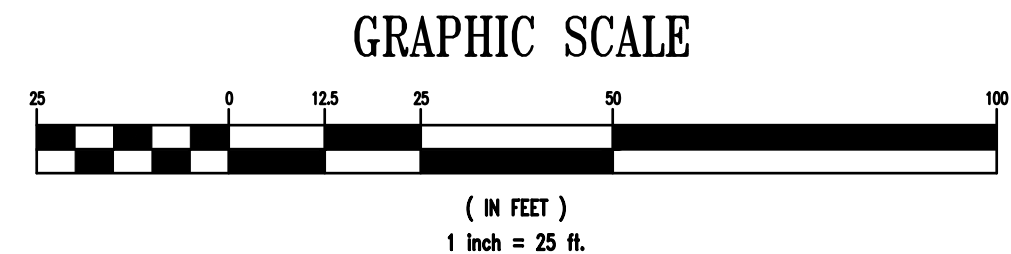
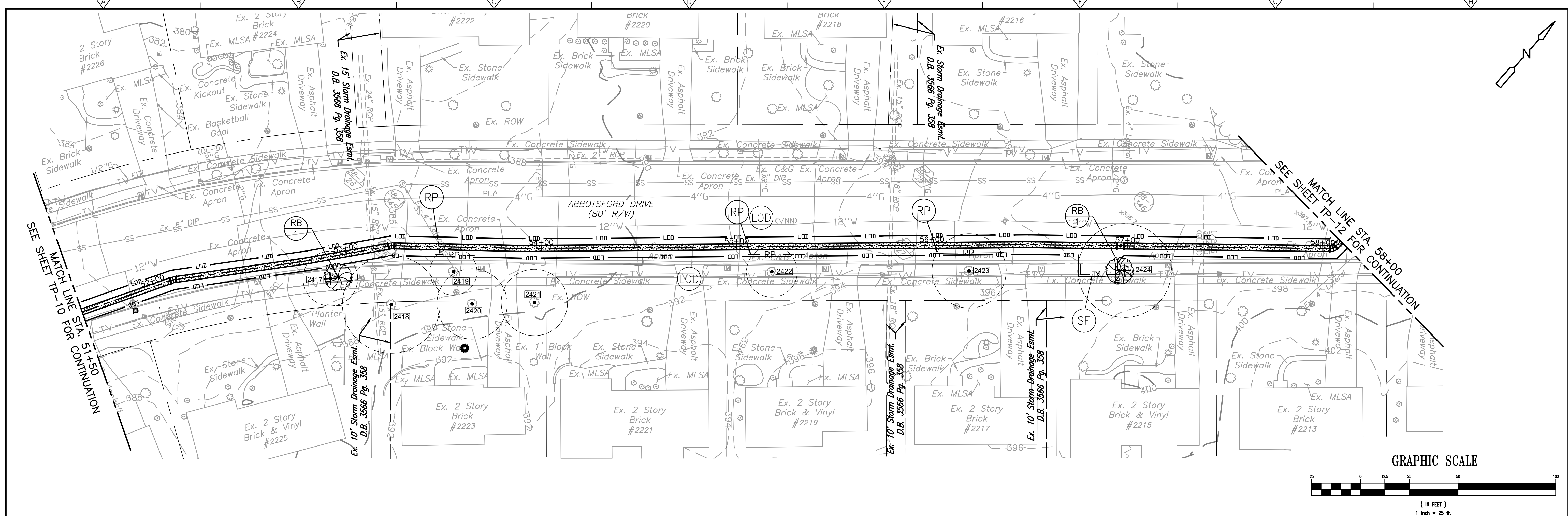
CDM Smith
 10306 Eaton Place, Suite 500
 Fairfax, VA 22030
 Tel: (703) 691-6500

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 RINKER DESIGN ASSOC.
 11100 Endeavor Court
 Suite 200
 Manassas, VA 20109

FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

TREE PRESERVATION
 AND PLANTING PLAN
 STA 45+00 TO STA 51+50

PROJECT NO. 5003-244105
FILE NAME:04-12 TREE PRES
SHEET NO. TP-10



PROPOSED PLANT LIST

SYM.	ABBV.	QUAN.	COMMON NAME	BOTANICAL NAME	SIZE	ROOT
	RB	2	RIVER BIRCH	BETULA NIGRA	1" CAL.	B & B

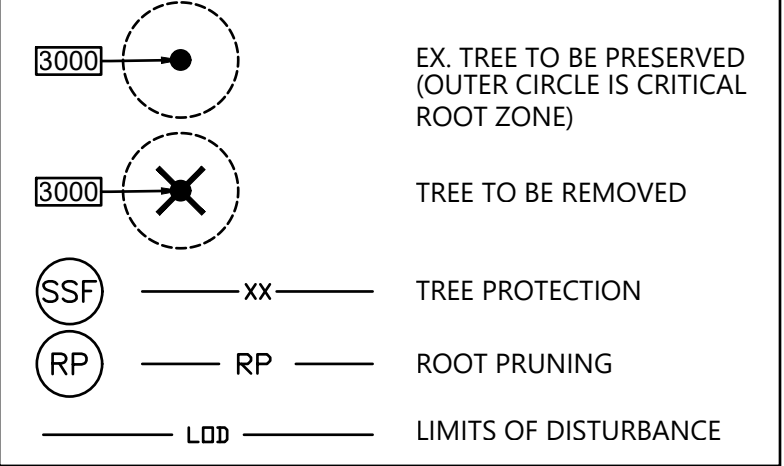
SEE SHEET TP-1 FOR FULL LIST OF PROPOSED PLANTINGS.

SHEET TP-11 TREE SUMMARY:

TREES TO BE REMOVED = 2 THIS SHEET
 TREES TO BE PLANTED = 2 THIS SHEET

NOTE: PROPOSED TREE PLANTING SHALL BE DIRECTED AND APPROVED BY FAIRFAX COUNTY.

TREE PRESERVATION PLAN LEGEND:



NOTE: SUPER SILT FENCE ALSO SERVES AS TREE PROTECTION

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
 SHEET CHK'D BY: A. YEAGLE
 CROSS CHK'D BY: C. HENEGAR
 APPROVED BY: C. HENEGAR
 DATE: AUGUST 2024

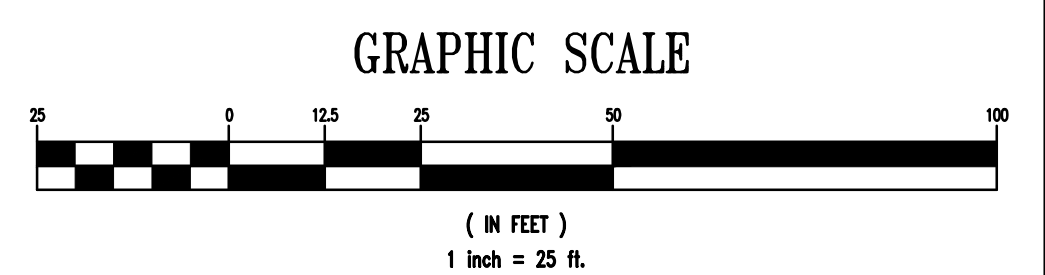
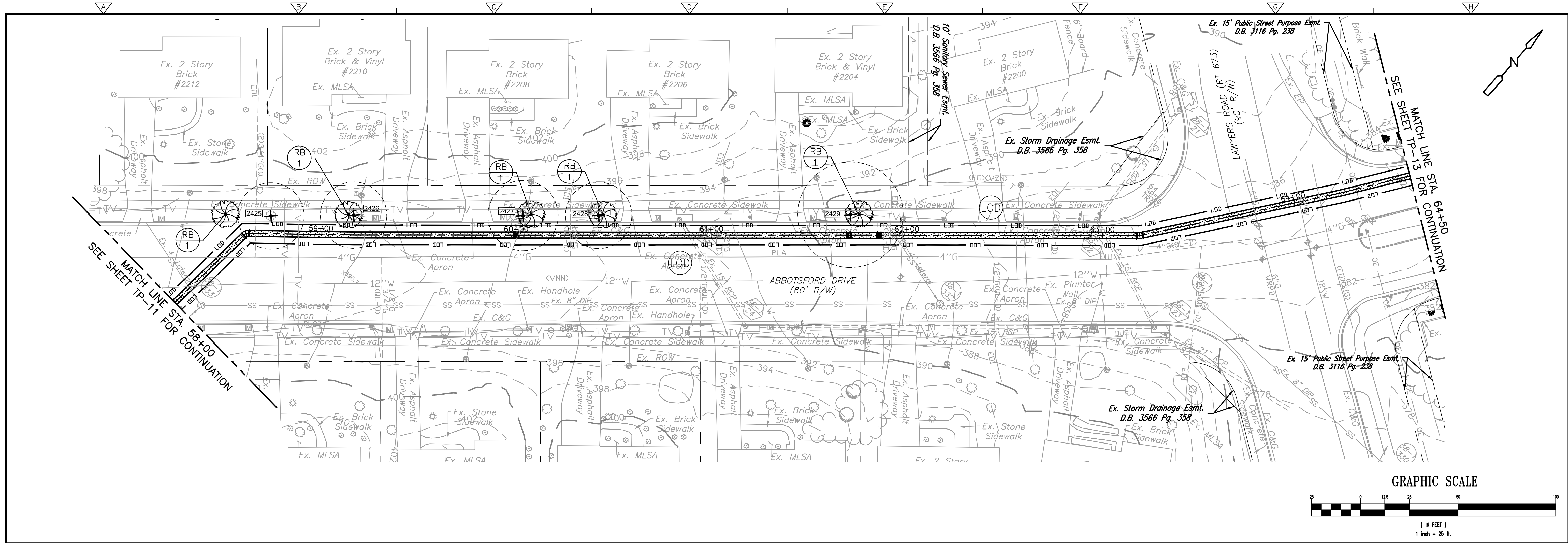
11100 Endeavor Court
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 Manassas, VA 20109

FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

TREE PRESERVATION
 AND PLANTING PLAN
 STA 51+50 TO STA 58+00

TREE PRESERVATION AND PLANTING PLAN
 STA 51+50 TO STA 58+00

PROJECT NO. 5003-244105
FILE NAME: 04-12 TREE PRES
SHEET NO. TP-11



Tree #	Species	Size dbh	CRZ Critical Root Zone (radius ft)	SRZ Structural Rooting Zone (radius ft)	Condition %	Canopy Position	Crown Radius Avg. Radius (ft)	Crown Density %	* Dead Tree	* Poor	* Assessment	* Off Site/Co-	Status	Activities				
														*Tree	*Root Prune	*Monitor/Risk	*UFMD Review	*Hand Removal
2425	Callery pear	17	17	5.61	65	Codominant	15	70					REMOVE					
2426	Callery pear	17	17	5.61	70	Codominant	20	80					REMOVE					
2427	Callery pear	18	18	5.94	75	Codominant	20	80					REMOVE					
2428	Callery pear	17	17	5.61	70	Codominant	20	80					REMOVE					
2429	Callery pear	27	27	8.91	45	Isolated	15	20	X				REMOVE					X

PROPOSED PLANT LIST

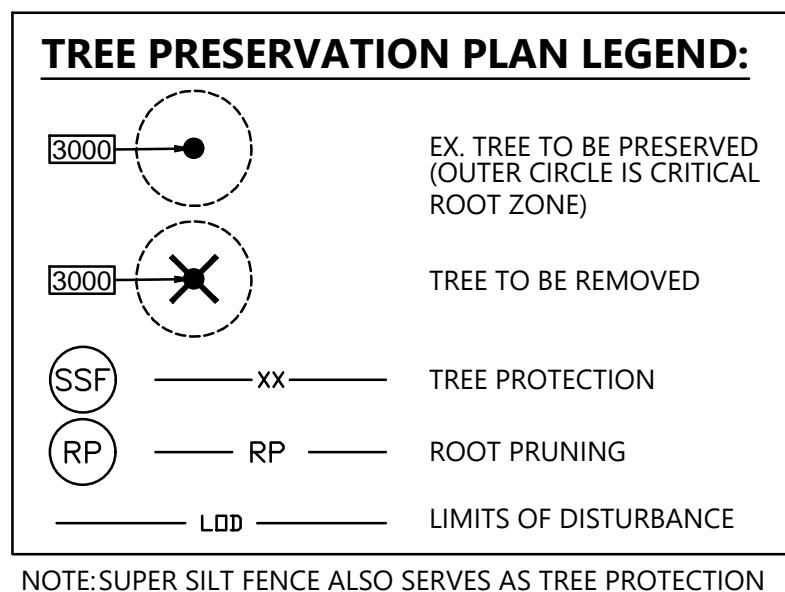
SYM.	ABBV.	QUAN.	COMMON NAME	BOTANICAL NAME	SIZE	ROOT
	RB	5	RIVER BIRCH	BETULA NIGRA	1" CAL.	B & B

SEE SHEET TP-1 FOR FULL LIST OF PROPOSED PLANTINGS.

SHEET TP-12 TREE SUMMARY:

TREES TO BE REMOVED = 5 THIS SHEET
 TREES TO BE PLANTED = 5 THIS SHEET

NOTE: PROPOSED TREE PLANTING SHALL BE DIRECTED AND APPROVED BY FAIRFAX COUNTY.



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
 SHEET CHK'D BY: A. YEAGLE
 CROSS CHK'D BY: C. HENEGAR
 APPROVED BY: C. HENEGAR
 DATE: AUGUST 2024

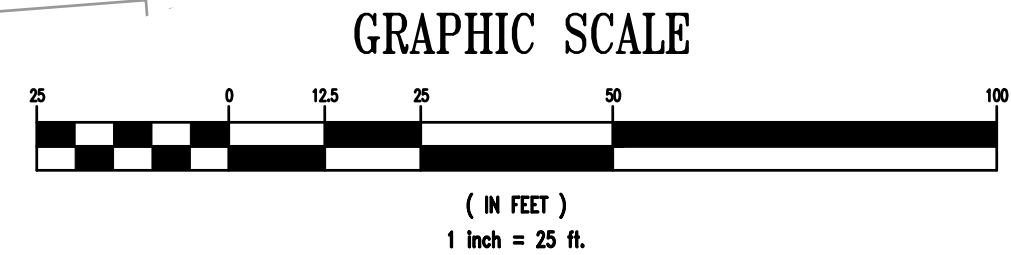
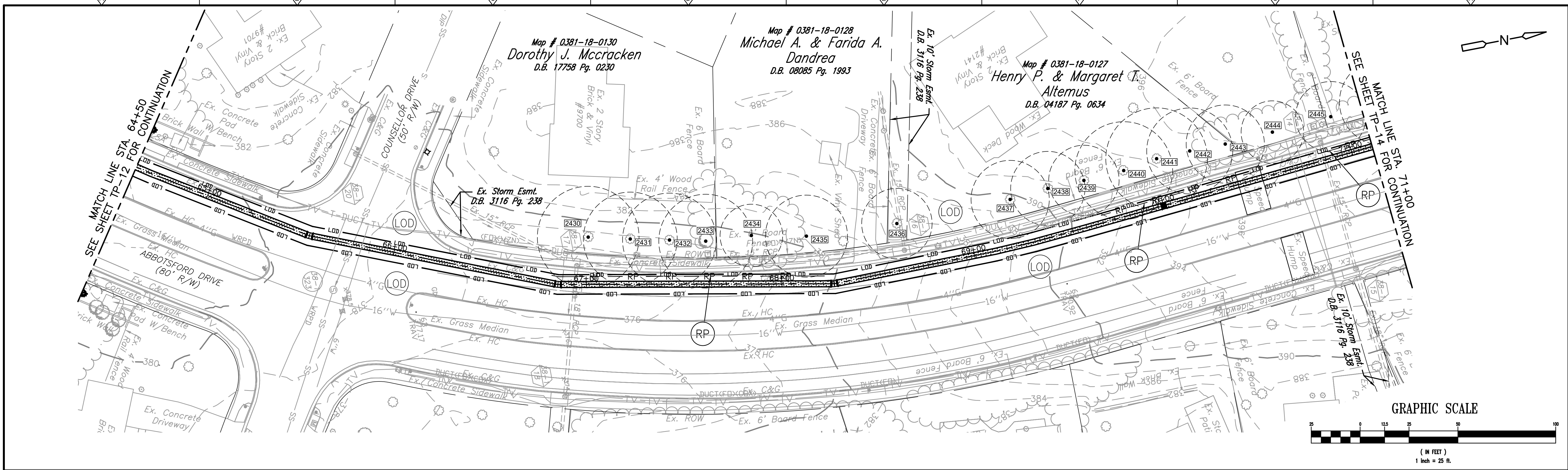
CDM Smith
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 Suite 200
 Manassas, VA 20109

FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

TREE PRESERVATION AND PLANTING PLAN
 STA 58+00 TO STA 64+50

PROJECT NO. 5003-244105 FILE NAME:04-12 TREE PRES
SHEET NO. TP-12



Tree #	Species	Size	CRZ	SRZ	Condition	Canopy Position	Crown Radius	Crown Density	Status	Activities								
										dbh	Critical Root Zone (radius ft)	Structural Rooting Zone (radius ft)	%	*Dead Tree	*Poor	*Assessment	*Off Site/Co-	*Tree
2430	red maple	26	26	8.58	70	Codominant	25	70	PRESERVE	X	X							
2431	red maple	24	24	7.92	65	Codominant	25	60	PRESERVE	X	X							
2432	red maple	24	24	7.92	75	Codominant	25	70	PRESERVE	X	X							
2433	red maple	24	24	7.92	65	Codominant	20	40	PRESERVE	X	X							
2434	red maple	16	16	5.28	75	Codominant	20	50	PRESERVE	X	X							
2435	red maple	21	21	6.93	75	Codominant	25	70	PRESERVE	X	X							
2436	red maple	18	18	5.94	70	Codominant	20	40	PRESERVE	X								
2437	red maple	20	20	6.6	60	Codominant	20	60	PRESERVE	X								
2438	red maple	19	19	6.27	75	Codominant	25	70	PRESERVE	X								
2439	red maple	18	18	5.94	75	Codominant	20	50	PRESERVE	X								
2440	red maple	25	25	8.25	70	Codominant	30	70	PRESERVE	X	X							
2441	red maple	26	26	8.58	70	Codominant	30	70	PRESERVE	X	X							
2442	red maple	22	22	7.26	60	Codominant	25	60	PRESERVE	X	X							
2443	red maple	20	20	6.6	70	Codominant	20	60	PRESERVE	X	X							
2444	red maple	16	16	5.28	70	Codominant	15	60	PRESERVE	X								
2445	red maple	18	18	5.94	75	Codominant	25	70	PRESERVE	X	X							

SHEET TP-13 TREE SUMMARY:
 TREES TO BE REMOVED = 0 THIS SHEET
 TREES TO BE PLANTED = 0 THIS SHEET
 NOTE: PROPOSED TREE PLANTING SHALL BE DIRECTED AND APPROVED BY FAIRFAX COUNTY.

TREE PRESERVATION PLAN LEGEND:

- 3000 (circle with dot) EX. TREE TO BE PRESERVED (OUTER CIRCLE IS CRITICAL ROOT ZONE)
- 3000 (circle with X) TREE TO BE REMOVED
- SSP (circle) TREE PROTECTION
- RP (circle) ROOT PRUNING
- LDD (line) LIMITS OF DISTURBANCE

NOTE: SUPER SILT FENCE ALSO SERVES AS TREE PROTECTION

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
 SHEET CHK'D BY: A. YEAGLE
 CROSS CHK'D BY: C. HENEGAR
 APPROVED BY: C. HENEGAR
 DATE: AUGUST 2024

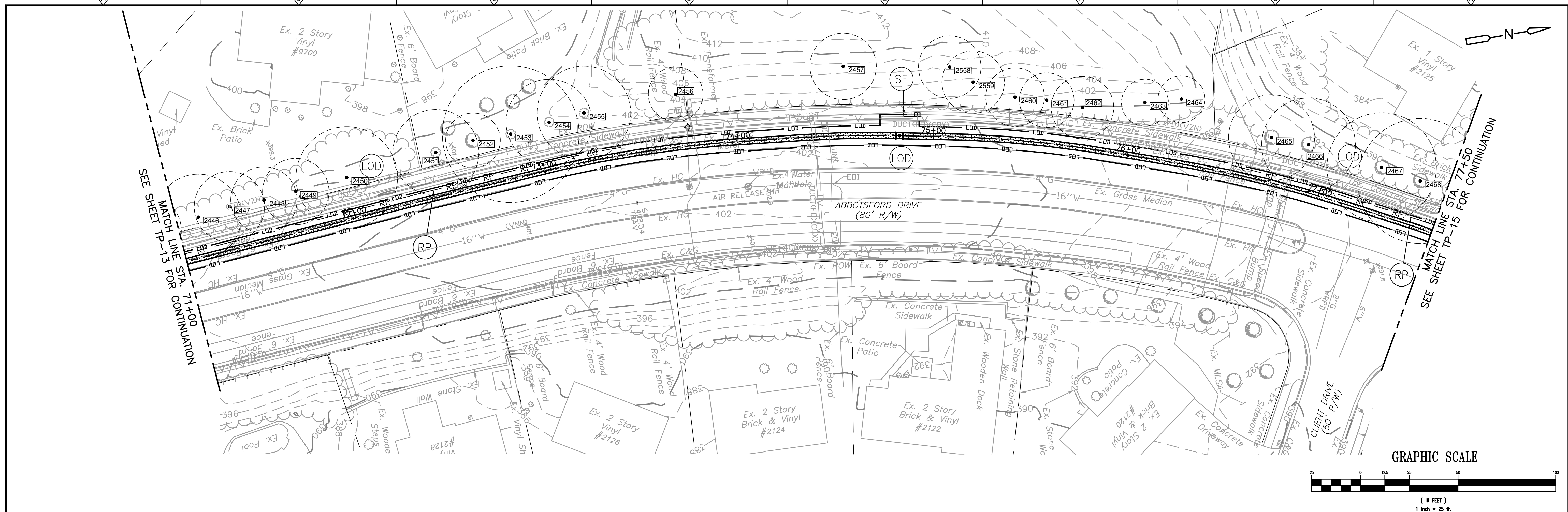
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FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

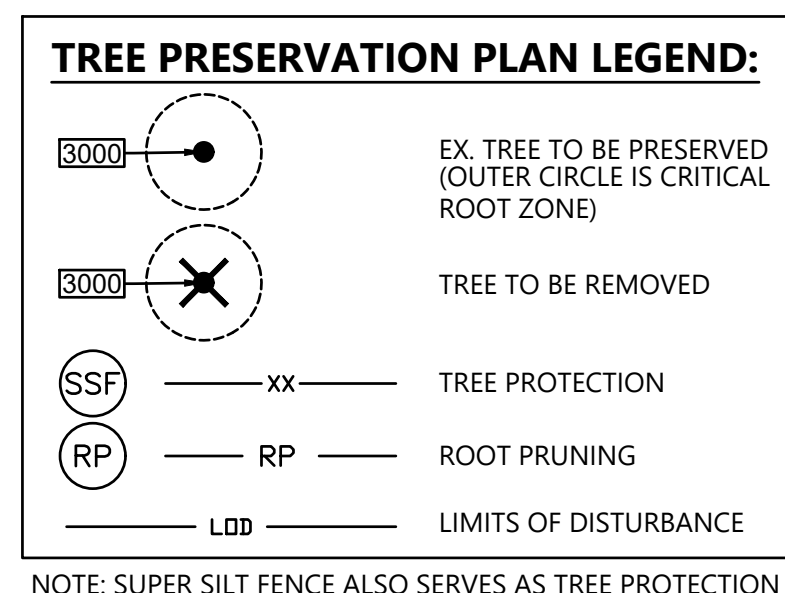
TREE PRESERVATION AND PLANTING PLAN
 STA 64+50 TO STA 71+00

PROJECT NO. 5003-244105
FILE NAME: 13-22 TREE PRES
SHEET NO. TP-13



Tree #	Species	Size	CRZ	SRZ	Condition	Canopy Position	Crown Radius	Crown Density	Avg. Radius (ft)	Dead Tree	Poor	Assessment	Off Site/Co-	Status	Activities			
															*Tree	*Root Prune	*Monitor/Risk	*UFMD Review
2446	red maple	22	22	7.26	75	Codominant	30	70						PRESERVE	X	X		
2447	red maple	18	18	5.94	75	Codominant	25	80						PRESERVE	X			
2448	red maple	17	17	5.61	70	Codominant	25	60						PRESERVE	X			
2449	red maple	17	17	5.61	75	Codominant	20	70						PRESERVE	X			
2450	red maple	26	26	8.58	75	Codominant	30	80						PRESERVE	X	X		
2451	red maple	22	22	7.26	75	Codominant	20	80						PRESERVE	X	X		
2452	red maple	14	14	4.62	75	Codominant	15	80						PRESERVE	X			
2453	red maple	35	35	11.55	65	Codominant	25	80						PRESERVE	X	X		
2454	red maple	22	22	7.26	75	Codominant	20	80						PRESERVE	X	X		
2455	red maple	24	24	7.92	75	Codominant	20	70						PRESERVE	X	X		
2456	Carolina hemlock	14	14	4.62	75	Codominant	15	60						PRESERVE	X			
2457	chestnut oak	17	17	5.61	75	Intermediate	20	50						PRESERVE	X			
2458	chestnut oak	16	16	5.28	75	Codominant	20	50						PRESERVE	X			
2459	pin oak	12,11	16	5.28	70	Codominant	15	40						PRESERVE	X			
2460	chestnut oak	15	15	4.95	75	Codominant	20	60						PRESERVE	X			
2461	chestnut oak	10,10	14	4.62	70	Codominant	15	40						PRESERVE	X			
2462	red maple	12,10	16	5.28	70	Codominant	20	50						PRESERVE	X			
2463	black cherry	12	12	3.96	70	Codominant	15	30						PRESERVE	X			
2464	black cherry	12	12	3.96	75	Codominant	15	60						PRESERVE	X			
2465	red maple	18,13	22	7.26	75	Codominant	30	70						PRESERVE	X	X		
2466	red maple	22,18,18	24	7.92	75	Codominant	30	70						PRESERVE	X	X		
2467	red maple	28	28	9.24	75	Codominant	30	70						PRESERVE	X	X		
2468	red maple	18,16,16,14	32	10.56	75	Codominant	30	60						PRESERVE	X	X		

SHEET TP-14 TREE SUMMARY:
 TREES TO BE REMOVED = 0 THIS SHEET
 TREES TO BE PLANTED = 0 THIS SHEET
 NOTE: PROPOSED TREE PLANTING SHALL BE DIRECTED AND APPROVED BY FAIRFAX COUNTY.



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
 SHEET CHK'D BY: A. YEAGLE
 CROSS CHK'D BY: C. HENEGAR
 APPROVED BY: C. HENEGAR
 DATE: AUGUST 2024

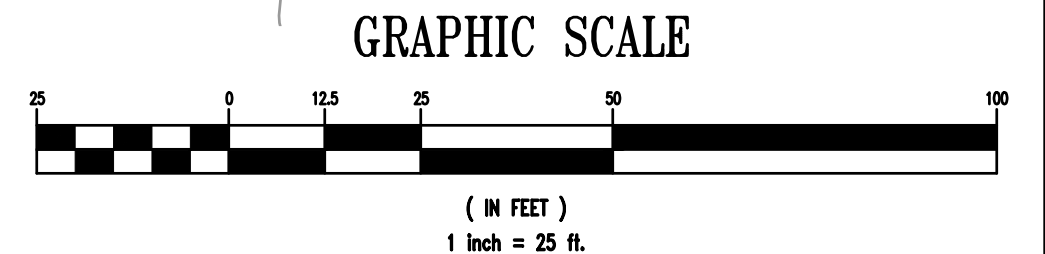
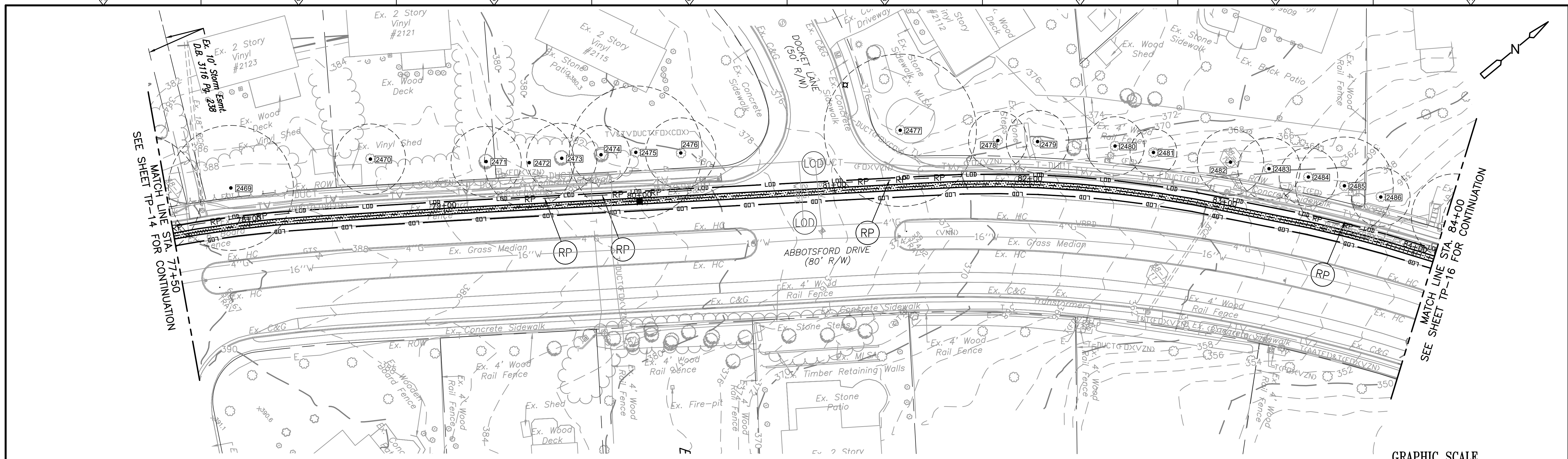
CDM Smith
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 Fairfax, VA 22030
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 RINKER DESIGN ASSOC.
 11109 Endeavor Court
 Suite 200
 Manassas, VA 20109

FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

TREE PRESERVATION AND PLANTING PLAN
 STA 71+00 TO STA 77+50

PROJECT NO. 5003-244105
 FILE NAME: 3-22 TREE PRES
 SHEET NO. TP-14



Tree #	Species	Size dbh	CRZ Critical Root Zone (radius ft)	SRZ Structural Rooting Zone (radius ft)	Condition %	Canopy Position	Crown Radius Avg. Radius (ft)	Crown Density %	*Dead Tree	*Poor	*Assessment	*Off Site/Co-	Status	Activities				
														*Tree	*Root Prune	*Monitor/Risk	*UFMD Review	*Hard Removal
2469	red maple	32	32	10.56	75	Codominant	30	80					PRESERVE	X	X			
2470	pin oak	18	18	5.94	75	Codominant	20	70					PRESERVE	X				
2471	red maple	18	18	5.94	75	Codominant	20	60					PRESERVE	X				
2472	red maple	23	23	7.59	70	Codominant	30	80					PRESERVE	X	X			
2473	red maple	18	18	5.94	70	Codominant	15	40					PRESERVE	X				
2474	red maple	15	15	4.95	70	Codominant	15	70					PRESERVE	X				
2475	red maple	34	34	11.22	65	Codominant	35	80					PRESERVE	X	X			
2476	red maple	18	18	5.94	70	Codominant	25	60					PRESERVE	X				
2477	pin oak	39	39	12.87	80	Codominant	40	80					PRESERVE	X	X			
2478	red maple	15	15	4.95	75	Codominant	20	70					PRESERVE	X				
2479	red maple	16	16	5.28	60	Codominant	15	80					PRESERVE	X				
2480	red maple	15	15	4.95	70	Codominant	15	40					PRESERVE	X				
2481	red maple	12	12	3.96	80	Codominant	15	60					PRESERVE	X				
2482	red maple	17	17	5.61	70	Codominant	20	60					PRESERVE	X				
2483	red maple	16	16	5.28	75	Codominant	25	60					PRESERVE	X				
2484	red maple	15	15	4.95	75	Codominant	20	70					PRESERVE	X				
2485	red maple	25	25	8.25	75	Codominant	25	80					PRESERVE	X	X			
2486	red maple	15	15	4.95	80	Codominant	20	60					PRESERVE	X				

SHEET TP-15 TREE SUMMARY:
 TREES TO BE REMOVED = 0 THIS SHEET
 TREES TO BE PLANTED = 0 THIS SHEET
 NOTE: PROPOSED TREE PLANTING SHALL BE DIRECTED AND APPROVED BY FAIRFAX COUNTY.

TREE PRESERVATION PLAN LEGEND:

- EX. TREE TO BE PRESERVED (OUTER CIRCLE IS CRITICAL ROOT ZONE)
- TREE TO BE REMOVED
- TREE PROTECTION
- ROOT PRUNING
- LIMITS OF DISTURBANCE

NOTE: SUPER SILT FENCE ALSO SERVES AS TREE PROTECTION

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
 SHEET CHK'D BY: A. YEAGLE
 CROSS CHK'D BY: C. HENEGAR
 APPROVED BY: C. HENEGAR
 DATE: AUGUST 2024

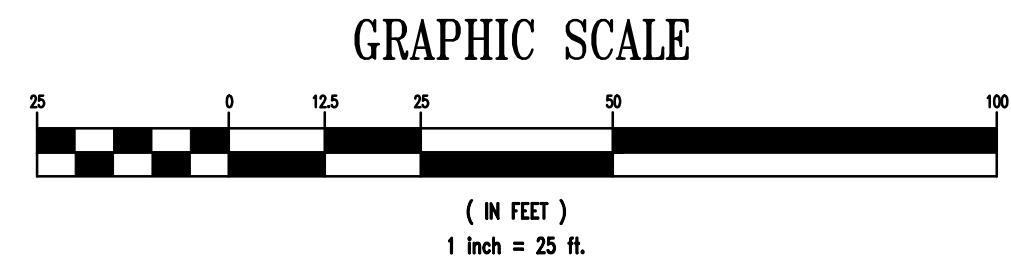
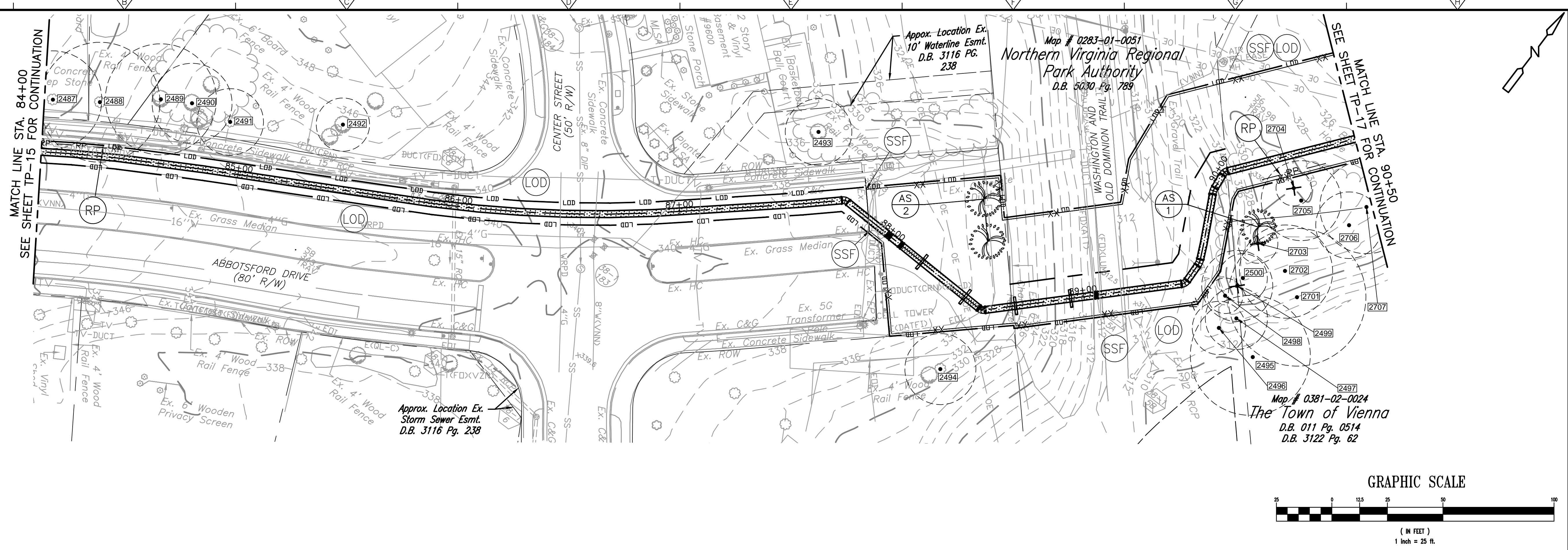
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 10306 Eaton Place, Suite 500
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FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

TREE PRESERVATION AND PLANTING PLAN
 STA 77+50 TO STA 84+00

PROJECT NO. 5003-244105
 FILE NAME: 13-22 TREE PRES
 SHEET NO. TP-15



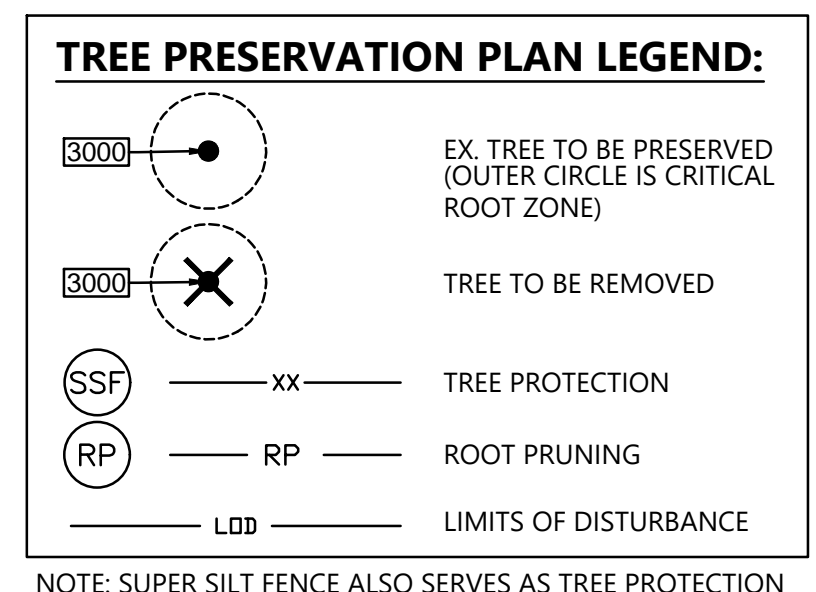
Tree #	Species	Size	CRZ	SRZ	Condition	Canopy Position	Crown Radius	Crown Density	*Dead Tree	*Poor	*Assessment	*Off Site/Co.	Status	Activities						
														*Tree	*Root Prune	*Monitor/Risk	*UFMD Review	*Hand Removal		
		dbh	Critical Root Zone (radius ft)	Structural Rooting Zone (radius ft)	%		Avg. Radius (ft)	%												
2487	red maple	22	22	7.26	80	Codominant	25	80					PRESERVE	X	X					
2488	red maple	27	27	8.91	70	Codominant	30	80					PRESERVE	X	X					
2489	eastern white pine	25	25	8.25	80	Codominant	20	80					PRESERVE	X						
2490	red maple	18	18	5.94	75	Codominant	25	60					PRESERVE	X						
2491	red maple	15	15	4.95	75	Codominant	20	40					PRESERVE	X						
2492	eastern white pine	12	12	3.96	80	Codominant	15	80					PRESERVE	X						
2493	American holly	15	15	4.95	80	Codominant	15	90					PRESERVE	X						
2494	eastern red cedar	16	16	5.28	80	Codominant	15	80					PRESERVE	X						
2495	tulip tree	27	27	8.91	80	Codominant	35	70					PRESERVE	X						
2496	black oak	12	12	3.96	75	Codominant	15	60					PRESERVE	X						
2497	pin oak	14	14	4.62	75	Codominant	20	60					PRESERVE	X						
2498	black oak	8	8	2.64	40		10	20		X			PRESERVE	X						
2499	oak species	16			0								REMOVE							X
2500	Virginia pine	11	11	3.63	70	Codominant	10	20					PRESERVE	X						
2701	white oak	31	31	10.23	60	Codominant	25	70					PRESERVE	X						
2702	white oak	21	21	6.93	70	Codominant	25	60					PRESERVE	X						
2703	Virginia pine	9			0					X			REMOVE							
2704	tulip tree	8	8	2.64	80	Codominant	15	60					REMOVE							
2705	white oak	18	18	5.94	60	Codominant	20	40					PRESERVE	X	X					
2706	tulip tree	15	15	4.95	80	Codominant	15	70					PRESERVE	X						
2707	tulip tree	21	21	6.93	80	Codominant	25	80					PRESERVE	X						

SYM.	ABBV.	QUAN.	COMMON NAME	BOTANICAL NAME	SIZE	ROOT
	AS	3	AMERICAN SYCAMORE	PLATANUS OCCIDENTALIS	1" CAL.	B & B

SHEET TP-16 TREE SUMMARY:

TREES TO BE REMOVED = 3 THIS SHEET
 TREES TO BE PLANTED = 3 THIS SHEET

NOTE: PROPOSED TREE PLANTING SHALL BE DIRECTED AND APPROVED BY FAIRFAX COUNTY.



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
 SHEET CHK'D BY: A. YEAGLE
 CROSS CHK'D BY: C. HENEGAR
 APPROVED BY: C. HENEGAR
 DATE: AUGUST 2024

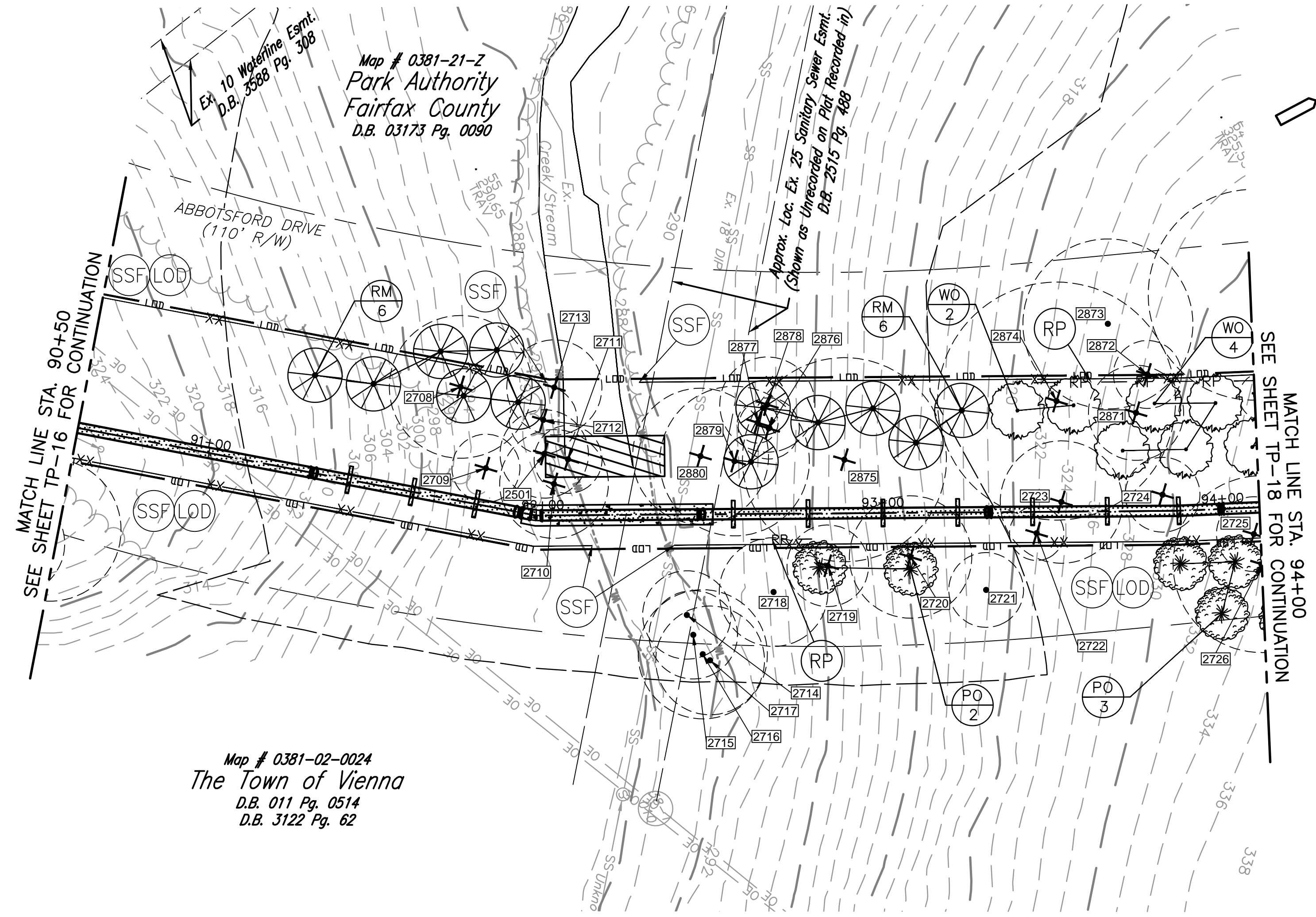
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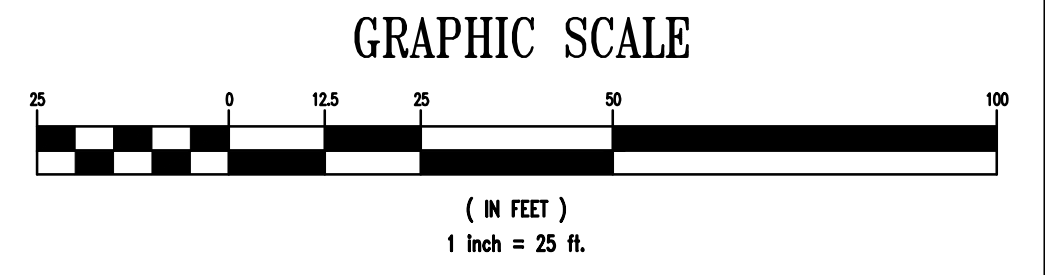
FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

TREE PRESERVATION AND PLANTING PLAN
 STA 84+00 TO STA 90+50

PROJECT NO. 5003-244105
FILE NAME: 3-22 TREE PRES
SHEET NO. TP-16



NOTE: FINAL PLANTING LOCATIONS TO BE COORDINATED WITH FAIRFAX COUNTY.



TREE INVENTORY NOTE: TREE LABELS 2502-2700 ARE NOT USED.

Tree #	Species	Size dbh	CRZ Critical Root Zone (radius ft)	SRZ Structural Rooting Zone (radius ft)	Condition %	Canopy Position	Crown Radius Avg. Radius (ft)	Crown Density %	Status			Activities				
									*Dead Tree	*Poor	*Assessment	*Tree	*Root Prune	*Monitor/Risk	*UFMD Review	*Hand Removal
2501	white oak	13	13	4.29	55	Codominant	10	50				REMOVE				
2708	white oak	21	21	6.93	80	Codominant	25	80				REMOVE				
2709	hickory	10	10	3.3	75	Codominant	20	30				REMOVE				
2710	scarlet oak	16	16	5.28	60	Codominant	20	40				REMOVE				
2711	blackgum	10	10	3.3	50	Codominant	5	30				REMOVE				
2712	tulip tree	10	10	3.3	75	Intermediate	10	50				REMOVE				
2713	tulip tree	14	14	4.62	65	Codominant	15	50				REMOVE				
2714	American sycamore	13	13	4.29	65	Codominant	15	40				PRESERVE	X			
2715	American sycamore	13	13	4.29	60	Codominant	10	20				PRESERVE	X			
2716	American sycamore	19	19	6.27	65	Codominant	20	60				PRESERVE	X			
2717	tulip tree	16	16	5.28	60	Codominant	10	30				PRESERVE	X			
2718	hickory	16	16	5.28	75	Codominant	25	70				PRESERVE	X	X		
2719	white oak	12	12	3.96	70	Codominant	15	30				REMOVE				X
2720	white oak	18		0					X			REMOVE				X
2721	blackgum	11	11	3.63	80	Codominant	15	60				PRESERVE	X			
2722	hickory	8	8	2.64	75	Intermediate	10	50				REMOVE				
2723	white oak	18	18	5.94	80	Codominant	20	60				REMOVE				
2724	tulip tree	11	11	3.63	80	Codominant	15	80				REMOVE				
2725	hickory	11	11	3.63	75	Codominant	15	60				REMOVE				
2726	northern red oak	26	26	8.58	80	Codominant	35	80				REMOVE				
2871	hickory	14	14	4.62	80	Codominant	20	80				REMOVE				
2872	hickory	10	10	3.3	80	Codominant	10	70				REMOVE				
2873	northern red oak	25	25	8.25	80	Codominant	25	80				PRESERVE	X	X		
2874	white oak	35	35	11.55	75	Codominant	40	70				REMOVE				X
2875	white oak	30	30	9.9	65	Codominant	25	40				REMOVE				X
2876	American sycamore	9	9	2.97	60	Codominant	10	20				REMOVE				X
2877	American sycamore	6	6	1.98	65	Codominant	10	20				REMOVE				
2878	American sycamore	12.8	14	4.62	70	Codominant	15	40				REMOVE				
2879	tulip tree	20.9	22	7.26	75	Codominant	20	80				REMOVE				
2880	American sycamore	20	20	6.6	75	Codominant	30	70				REMOVE				

SYM.	ABBV.	QUAN.	COMMON NAME	BOTANICAL NAME	SIZE	ROOT
	PO	5	PIN OAK	QUERCUS PALUSTRIS	1" CAL.	B & B
	WO	6	WILLOW OAK	QUERCUS PHELLOS	1" CAL.	B & B
	RM	12	RED MAPLE	ACER RUBRUM	1" CAL.	B & B

SEE SHEET TP-1 FOR FULL LIST OF PROPOSED PLANTINGS.

SHEET TP-17 TREE SUMMARY:

TREES TO BE REMOVED = 23 THIS SHEET
TREES TO BE PLANTED = 23 THIS SHEET

NOTE: PROPOSED TREE PLANTING SHALL BE DIRECTED AND APPROVED BY FAIRFAX COUNTY.

TREE PRESERVATION PLAN LEGEND:

- EX. TREE TO BE PRESERVED (OUTER CIRCLE IS CRITICAL ROOT ZONE)
- TREE TO BE REMOVED
- TREE PROTECTION
- ROOT PRUNING
- LIMITS OF DISTURBANCE

NOTE: SUPER SILT FENCE ALSO SERVES AS TREE PROTECTION

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
DRAWN BY: A. NGUYEN
SHEET CHK'D BY: A. YEAGLE
CROSS CHK'D BY: C. HENEGAR
APPROVED BY: C. HENEGAR
DATE: AUGUST 2024

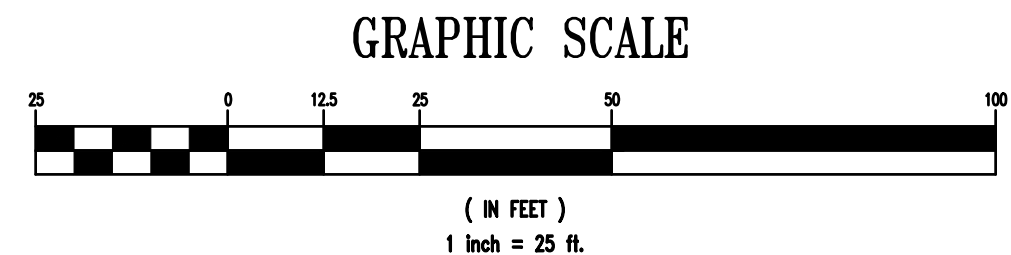
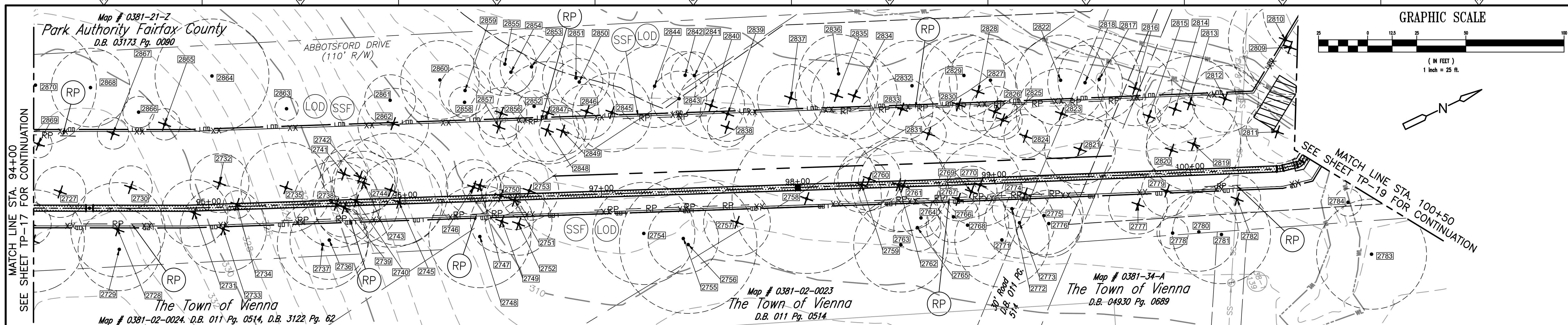
CDM Smith
10306 Eaton Place, Suite 500
Fairfax, VA 22030
Tel: (703) 691-6500

rda
RINKER DESIGN ASSOC.
11102 Endeavor Court
Suite 200
Manassas, VA 20109

FAIRFAX COUNTY, VIRGINIA
DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
TYSONS WASTEWATER CONVEYANCE SYSTEM
MODIFICATIONS
PACKAGE 4: FORCE MAIN

TREE PRESERVATION AND PLANTING PLAN
STA 90+50 TO STA 94+00

PROJECT NO. 5003-244105
FILE NAME: 3-22 TREE PRES
SHEET NO. TP-17



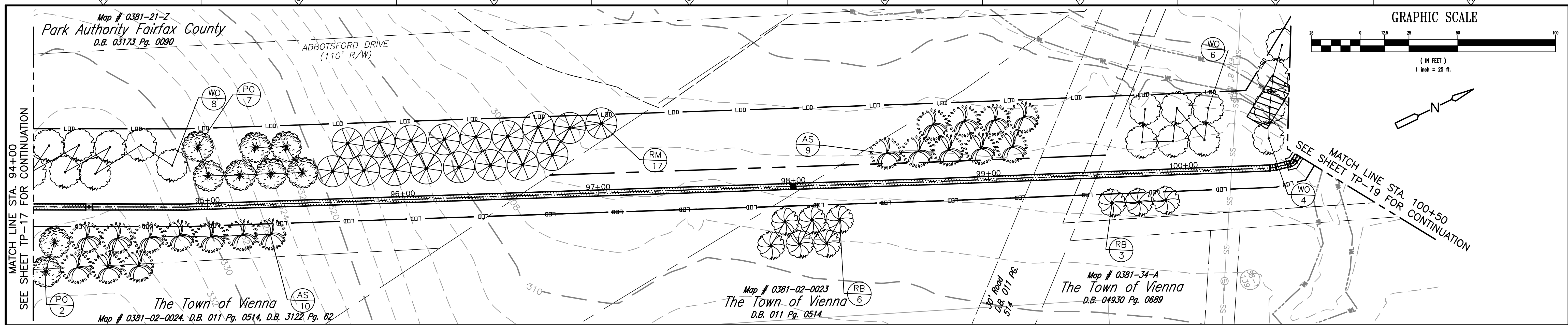
Tree #	Species	Size	CRZ	SRZ	Condition	Canopy Position	Crown Radius	Crown Density	Status	Activities			
										*Tree	*Root Prune	*Monitor/Risk	*Hand Removal
2727	blackgum	13			0				REMOVE				
2728	tulip tree	24	24	7.92	75	Codominant	30	70	REMOVE				
2729	red maple	21	21	6.93	70	Codominant	20	60	PRESERVE	X	X		
2730	tulip tree	11	11	3.63	75	Codominant	15	60	REMOVE				
2731	hickory	17	17	5.61	80	Codominant	20	70	REMOVE				
2732	blackgum	15	15	4.95	50	Codominant	15	20	REMOVE				
2733	tulip tree	22	22	7.26	80	Codominant	25	80	REMOVE				
2734	northern red oak	7	7	2.31	80	Intermediate	10	70	REMOVE				
2735	tulip tree	23	23	7.59	75	Intermediate	30	70	REMOVE				
2736	tulip tree	20	20	6.6	75	Codominant	20	40	PRESERVE	X	X		
2737	tulip tree	23	23	7.59	75	Codominant	25	60	PRESERVE	X	X		
2738	tulip tree	22	22	7.26	70	Codominant	20	40	REMOVE				
2739	tulip tree	15	15	4.95	60	Suppressed	15	20	REMOVE				
2740	tulip tree	22	22	7.26	75	Codominant	20	50	REMOVE			X	X
2741	tulip tree	12	12	3.96	60	Codominant	10	40	REMOVE				
2742	tulip tree	19	19	6.27	70	Codominant	20	50	REMOVE				
2743	tulip tree	16	16	5.28	75	Codominant	10	80	REMOVE				
2744	tulip tree	29	29	9.57	80		30	60	REMOVE				X
2745	tulip tree	22	22	7.26	75	Codominant	20	40	REMOVE				
2746	tulip tree	14	14	4.62	80	Codominant	20	60	REMOVE				
2747	Virginia pine	9			0				REMOVE				
2748	tulip tree	26	26	8.58	80	Codominant	25	70	PRESERVE	X	X		
2749	tulip tree	16	16	5.28	75	Codominant	15	40	REMOVE				
2750	Virginia pine	10	10	3.3	70	Codominant	5	40	REMOVE				
2751	tulip tree	15	15	4.95	80	Codominant	15	80	REMOVE				
2752	tulip tree	17	17	5.61	80	Codominant	20	50	REMOVE				
2753	tulip tree	15	15	4.95	80	Codominant	20	40	REMOVE				X
2754	tulip tree	26	26	8.58	75	Codominant	25	60	PRESERVE	X	X		
2755	tulip tree	18	18	5.94	75	Codominant	20	30	PRESERVE	X			
2756	tulip tree	35	35	11.55	75	Codominant	40	70	PRESERVE	X	X		
2757	tulip tree	17	17	5.61	80	Codominant	20	50	REMOVE				
2758	tulip tree	38	38	12.54	75	Codominant	40	80	REMOVE				X
2759	tulip tree	14	14	4.62	75	Codominant	15	50	REMOVE				
2760	tulip tree	16	16	5.28	75	Codominant	20	50	REMOVE				
2761	tulip tree	23	23	7.59	75	Codominant	30	50	REMOVE				
2762	tulip tree	24	24	7.92	80	Codominant	25	70	REMOVE				
2763	tulip tree	24	24	7.92	80	Codominant	25	70	PRESERVE	X	X		
2764	tulip tree	10	10	3.3	75	Codominant	15	40	PRESERVE	X	X		
2765	tulip tree	12	12	3.96	75	Intermediate	15	40	PRESERVE	X			
2766	tulip tree	13	13	4.29	75	Codominant	10	40	PRESERVE	X	X		
2767	tulip tree	11	11	3.63	65	Codominant	5	30	REMOVE				

Tree #	Species	Size	CRZ	SRZ	Condition	Canopy Position	Crown Radius	Crown Density	Status	Activities			
										*Tree	*Root Prune	*Monitor/Risk	*Hand Removal
2768	tulip tree	21	21	6.93	80	Codominant	20	70	PRESERVE				
2769	tulip tree	13	13	4.29	70	Codominant	15	30	REMOVE	X	X		
2770	tulip tree	21	21	6.93	80	Codominant	25	80	REMOVE				
2771	tulip tree	24	24	7.92	80	Codominant	25	60	PRESERVE	X	X		
2772	tulip tree	10	10	3.3	75	Intermediate	15	50	PRESERVE	X	X		
2773	tulip tree	18	18	5.94	80	Codominant	20	50	PRESERVE	X	X		
2774	bigtooth aspen	12			0				REMOVE				
2775	tulip tree	20	20	6.6	80	Codominant	25	50	PRESERVE	X	X		
2776	tulip tree	17	17	5.61	75	Codominant	20	50	PRESERVE	X	X		
2777	red maple	15	15	4.95	70	Codominant	20	50	REMOVE				
2778	tulip tree	8	8	2.64	75	Intermediate	15	40	PRESERVE	X			
2779	tulip tree	13	13	4.29	75	Codominant	20	70	REMOVE				
2780	tulip tree	20	20	6.6	80	Codominant	25	60	PRESERVE	X			
2781	tulip tree	25	25	8.25	75	Codominant	30	70	PRESERVE	X	X		
2782	bigtooth aspen	12	12	3.96	65	Codominant	10	80	REMOVE				
2783	white oak	28	28	9.24	75	Codominant	35	70	PRESERVE	X			
2784	sweet cherry	7	7	2.31	40	Intermediate	15	10	PRESERVE	X			
2809	tulip tree	24	24	7.92	75	Codominant	30	60	REMOVE				
2810	tulip tree	25,15	29	9.57	75	Codominant	35	70	REMOVE				
2811	black locust	16	16	5.28	65	Codominant	20	70	REMOVE				X
2812	red maple	17	17	5.61	70	Codominant	20	40	REMOVE				
2813	red maple	24	24	7.92	70	Codominant	25	70	REMOVE				
2814	tulip tree	10	10	3.3	75	Intermediate	15	70	REMOVE				
2815	tulip tree	6	6	1.98	75	Codominant	10	40	REMOVE				
2816	red maple	19	19	6.27	70	Codominant	20	50	REMOVE				
2817	tulip tree	21	21	6.93	75	Codominant	25	80	PRESERVE	X	X		
2818	tulip tree	19	19	6.27	70	Codominant	20	60	PRESERVE	X	X		
2819	red maple	24	24	7.92	60	Codominant	20	60	REMOVE				
2820	tulip tree	13	13	4.29	75	Codominant	15	60	REMOVE				
2821	tulip tree	18	18	5.94	80	Codominant	20	60	REMOVE				
2822	tulip tree	23	23	7.59	75	Codominant	25	70	PRESERVE	X	X		
2823	tulip tree	23	23	7.59	75	Codominant	20	60	REMOVE				
2824	tulip tree	11	11	3.63	60	Codominant	5	50	REMOVE				
2825	tulip tree	10	10	3.3	65	Codominant	10	40	REMOVE				
2826	tulip tree	13	13	4.29	65	Codominant	10	40	REMOVE				
2827	tulip tree	21	21	6.93	75	Codominant	20	60	PRESERVE	X	X		
2828	sweetgum	18,9	20	6.6	70	Codominant	20	70	REMOVE				
2829	tulip tree	21	21	6.93	75	Codominant	15	70	PRESERVE	X	X		
2830	tulip tree	19,6	20	6.6	75	Codominant	25	60	REMOVE				
2831	tulip tree	9	9	2.97	65	Codominant	10	30	REMOVE				
2832	tulip tree	23	23	7.59	75	Codominant	20	50	PRESERVE	X	X		
2833	tulip tree	16	16	5.28	75	Codominant	20	40	REMOVE				

Tree #	Species	Size	CRZ	SRZ	Condition	Canopy Position	Crown Radius	Crown Density	Status	Activities			
										*Tree	*Root Prune	*Monitor/Risk	*Hand Removal
2834	tulip tree	22	22	7.26	75	Codominant	20	70	REMOVE				
2835	tulip tree	21	21	6.93	75	Codominant	20	60	REMOVE				
2836	tulip tree	20	20	6.6	75	Codominant	20	60	PRESERVE	X	X		
2837	tulip tree	17	17	5.61	60	Codominant	20	60	REMOVE				
2838	tulip tree	10	10	3.3	75	Codominant	15	60	REMOVE				
2839	tulip tree	14	14	4.62	70	Codominant	15	60	REMOVE				X
2840	tulip tree	17	17	5.61	75	Codominant	20	60	REMOVE				
2841	tulip tree	12	12	3.96	75	Codominant	10	70	PRESERVE	X			
2842	tulip tree	12	12	3.96	70	Codominant	15	40	PRESERVE	X			
2843	tulip tree	14	14	4.62	75	Codominant	20	60	PRESERVE	X	X		
2844	red maple	21	21	6.93	70	Codominant	25	60	PRESERVE	X	X		
2845	tulip tree	20	20	6.6	80	Codominant	25	70	REMOVE				X
2846	tulip tree	14	14	4.62	75	Codominant	15	30	REMOVE				X
2847	tulip tree	26	26	8.58	80	Codominant	25	80	REMOVE				X
2848	tulip tree	16	16	5.28	75	Codominant	20	50	REMOVE				
2849	tulip tree	12	12	3.96	70	Codominant	15	30	REMOVE				
2850	tulip tree	12	12	3.96	75	Codominant	15	60	PRESERVE	X			
2851	tulip tree	17	17	5.61	75	Codominant	20	60	PRESERVE	X			
2852	tulip tree	8	8	2.64	75	Codominant	15	60	PRESERVE	X	X		
2853	tulip tree	16	16	5.28	80	Codominant	20	70	PRESERVE	X			
2854	tulip tree	11	11	3.63	75	Codominant	15	60	PRESERVE	X			
2855	tulip tree	16	16	5.28	80	Codominant	20	70	PRESERVE	X			
2856	American holly	10,9	13	4.29	80	Intermediate	15	80	REMOVE				
2857	black cherry	10	10	3.3	70	Codominant	15	60	REMOVE				
2858	tulip tree	8	8	2.64	75	Codominant	15	60	PRESERVE	X			
2859	tulip tree	13	13	4.29	80	Codominant	15	70	PRESERVE	X			
2860	black oak	20	20	6.6	75	Codominant	25	70	PRESERVE	X			
2861	oak species	13			0				PRESERVE	X			
2862	tulip tree	18	18	5.94	70	Codominant	15	60	REMOVE				
2863	northern red oak	6	6	1.98	85	Intermediate	10	80	PRESERVE	X			
2864	white oak	29	29	9.57	65	Codominant	30	70	PRESERVE	X			
2865	blackgum	8	8	2.64	75	Codominant	15	70	REMOVE				X
2866	black locust	8	8	2.64	75	Codominant	15	60	PRESERVE	X			
2867	blackgum	8	8	2.64	75	Codominant	10	60	REMOVE				
2868	oak species	20			0				PRESERVE	X			
2869	black oak	7	7	2.31	75	Intermediate	15	70	REMOVE				
2870	white oak	31	31	10.23	70	Codominant	35	70	PRESERVE	X			

TREE PRESERVATION PLAN LEGEND:

-



NOTE: FINAL PLANTING LOCATIONS TO BE COORDINATED WITH FAIRFAX COUNTY.

PROPOSED PLANT LIST

SYM.	ABBV.	QUAN.	COMMON NAME	BOTANICAL NAME	SIZE	ROOT
	RB	9	RIVER BIRCH	BETULA NIGRA	1" CAL.	B & B
	AS	19	AMERICAN SYCAMORE	PLATANUS OCCIDENTALIS	1" CAL.	B & B
	PO	9	PIN OAK	QUERCUS PALUSTRIS	1" CAL.	B & B
	WO	18	WILLOW OAK	QUERCUS PHELLOS	1" CAL.	B & B
	RM	17	RED MAPLE	ACER RUBRUM	1" CAL.	B & B

SEE SHEET TP-1 FOR FULL LIST OF PROPOSED PLANTINGS.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
 SHEET CHK'D BY: A. YEAGLE
 CROSS CHK'D BY: C. HENEGAR
 APPROVED BY: C. HENEGAR
 DATE: AUGUST 2024

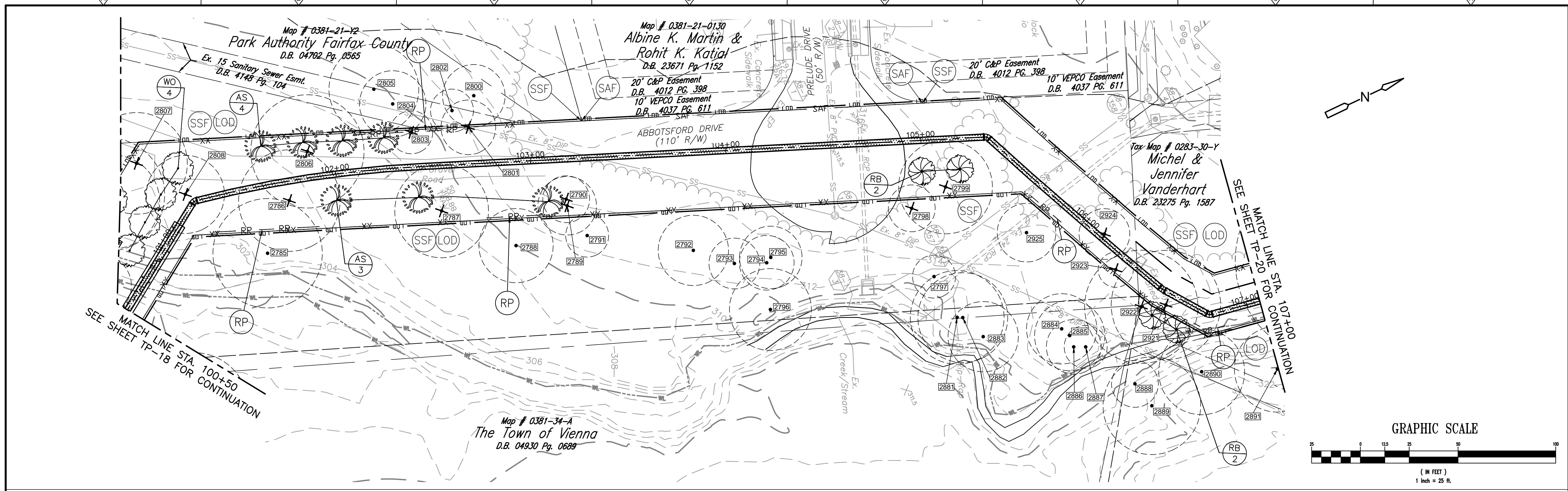
CDM Smith
 10306 Eaton Place, Suite 500
 Fairfax, VA 22030
 Tel: (703) 691-6500

rda
 RINKER DESIGN ASSOC.
 11100 Endeavor Court
 Suite 200
 Manassas, VA 20109

FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

PLANTING PLAN
 STA 94+00 TO STA 100+50

PROJECT NO. 5003-244105
 FILE NAME: 13-22 TREE PRES
 SHEET NO. TP-18A



Tree #	Species	Size	CRZ	SRZ	Condition	Canopy Position	Crown Radius	Crown Density	*Dead Tree	*Poor	*Assessment	*Off Site/Co-	Status	Activities				
														*Tree	*Root Prune	*Monitor/Risk	*UFMD Review	*Hand Removal
2785	tulip tree	28	28	9.24	70	Codominant	25	80					PRESERVE	X	X			
2786	tulip tree	26	26	8.58	70	Codominant	35	70					REMOVE					
2787	tulip tree	24	24	7.92	70	Codominant	25	80					REMOVE					X
2788	tulip tree	19	19	6.27	80	Codominant	25	70					PRESERVE	X				
2789	red maple	15	15	4.95	70	Codominant	20	40					REMOVE					
2790	red maple	12	12	3.96	70	Codominant	20	40					REMOVE					
2791	red maple	11	11	3.63	65	Codominant	15	40					PRESERVE	X				
2792	black locust	18	18	5.94	60	Codominant	15	60					PRESERVE	X				
2793	tulip tree	13			0				X				PRESERVE	X				
2794	tulip tree	14	14	4.62	70	Codominant	20	60					PRESERVE	X				
2795	tulip tree	16	16	5.28	75	Codominant	20	70					PRESERVE	X				
2796	tulip tree	16,13	21	6.93	65	Codominant	25	40					PRESERVE	X				
2797	tulip tree	11	11	3.63	60	Codominant	15	40					PRESERVE	X				
2798	black walnut	12	12	3.96	65	Codominant	20	50					REMOVE					
2799	red maple	24	24	7.92	75	Codominant	25	80					REMOVE					
2800	red maple	13,9	16	5.28	60	Codominant	20	40					PRESERVE	X				
2801	red maple	14	14	4.62	80	Codominant	25	80					REMOVE					
2802	red maple	11	11	3.63	75	Intermediate	20	60					PRESERVE	X	X			
2803	sassafras	11	11	3.63	60	Codominant	15	20					REMOVE					
2804	black cherry	12,12	17	5.61	65	Codominant	15	30					PRESERVE	X	X			
2805	tulip tree	23	23	7.59	75	Codominant	30	80					PRESERVE	X	X			
2806	tulip tree	29	29	9.57	75	Codominant	35	80					REMOVE					
2807	tulip tree	26	26	8.58	80	Codominant	35	70					REMOVE					
2808	tulip tree	20	20	6.6	80	Codominant	20	70					REMOVE					

Tree #	Species	Size	CRZ	SRZ	Condition	Canopy Position	Crown Radius	Crown Density	*Dead Tree	*Poor	*Assessment	*Off Site/Co-	Status	Activities				
														*Tree	*Root Prune	*Monitor/Risk	*UFMD Review	*Hand Removal
2881	red maple	24	24	7.92	65	Codominant	25	60					PRESERVE	X				
2882	red maple	23	23	7.59	65	Codominant	20	60					PRESERVE	X				
2883	oak species	18			0				X				PRESERVE	X				
2884	black walnut	18	18	5.94	70	Codominant	25	30					PRESERVE	X				
2885	black cherry	18	18	5.94	75	Codominant	20	70					PRESERVE	X				
2886	tulip tree	14	14	4.62	75	Codominant	20	70					PRESERVE	X				
2887	black cherry	11	11	3.63	70	Codominant	15	60					PRESERVE					
2888	northern red oak	12	12	3.96	60	Codominant	15	80					PRESERVE	X				
2889	white oak	25			0				X				PRESERVE	X				
2890	tulip tree	22	22	7.26	65	Codominant	30	80					PRESERVE	X	X			
2891	red maple	22	22	7.26	60	Codominant	20	70					PRESERVE	X				
2921	red maple	20,20	28	9.24	55	Codominant	30	70					REMOVE					
2922	red maple	29	29	9.57	65	Codominant	25	50					REMOVE					
2923	black walnut	9	9	2.97	75	Intermediate	15	70					REMOVE					X
2924	black walnut	13	13	4.29	80	Codominant	20	80					REMOVE					
2925	tulip tree	15	15	4.95	75	Codominant	20	60					PRESERVE	X	X			

PROPOSED PLANT LIST

SYM.	ABBV.	QUAN.	COMMON NAME	BOTANICAL NAME	SIZE	ROOT
	RB	4	RIVER BIRCH	BETULA NIGRA	1" CAL.	B & B
	AS	7	AMERICAN SYCAMORE	PLATANUS OCCIDENTALIS	1" CAL.	B & B
	WO	4	WILLOW OAK	QUERCUS PHELLOS	1" CAL.	B & B

SEE SHEET TP-1 FOR FULL LIST OF PROPOSED PLANTINGS.

SHEET TP-19 TREE SUMMARY:

TREES TO BE REMOVED = 15 THIS SHEET
TREES TO BE PLANTED = 15 THIS SHEET

NOTE: PROPOSED TREE PLANTING SHALL BE DIRECTED AND APPROVED BY FAIRFAX COUNTY.

TREE PRESERVATION PLAN LEGEND:

- EX. TREE TO BE PRESERVED (OUTER CIRCLE IS CRITICAL ROOT ZONE)
- TREE TO BE REMOVED
- TREE PROTECTION
- ROOT PRUNING
- LIMITS OF DISTURBANCE

NOTE: SUPER SILT FENCE ALSO SERVES AS TREE PROTECTION

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
DRAWN BY: A. NGUYEN
SHEET CHK'D BY: A. YEAGLE
CROSS CHK'D BY: C. HENEGAR
APPROVED BY: C. HENEGAR
DATE: AUGUST 2024

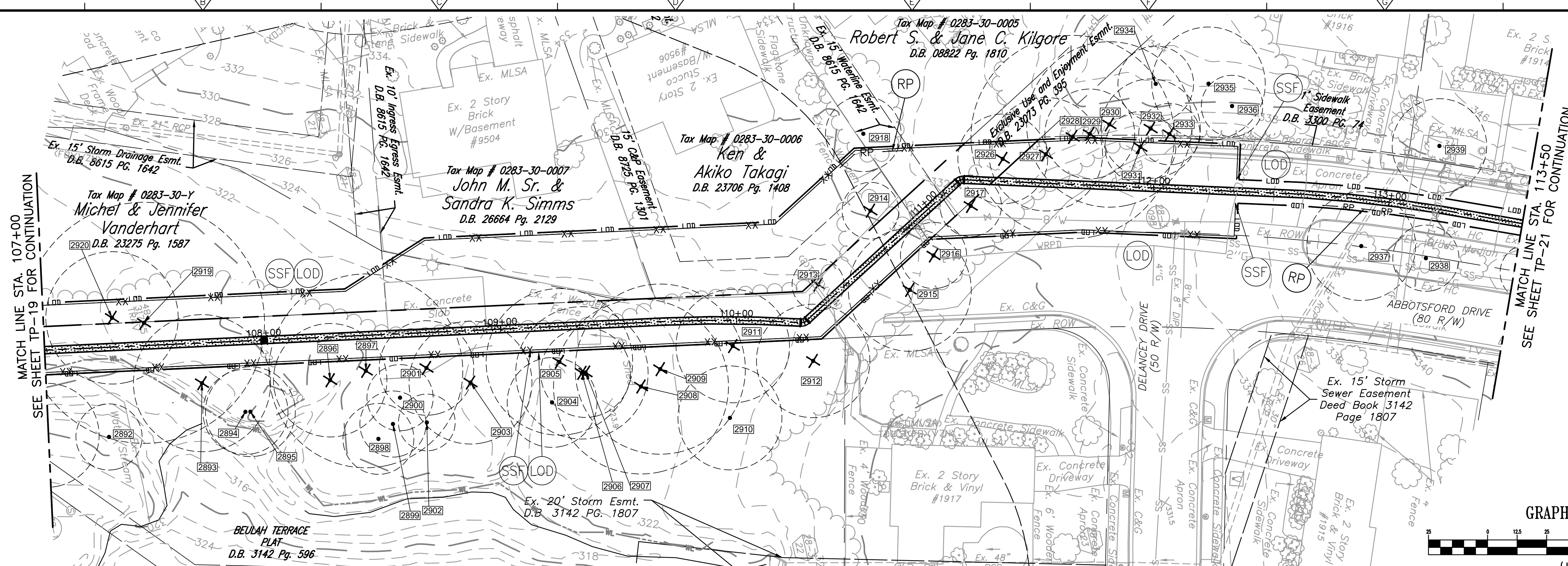
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FAIRFAX COUNTY, VIRGINIA
DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
TYSONS WASTEWATER CONVEYANCE SYSTEM
MODIFICATIONS
PACKAGE 4: FORCE MAIN

TREE PRESERVATION AND PLANTING PLAN
STA 100+50 TO STA 107+00

PROJECT NO. 5003-244105
FILE NAME: E3-22 TREE PRES
SHEET NO. TP-19



Tree #	Species	Size dbh	CRZ Critical Root Zone (radius ft)	SRZ Structural Rooting Zone (radius ft)	Condition %	Canopy Position	Crown Radius Avg. Radius (ft)	Crown Density %	Status	Activities				
										*Dead Tree	*Poor	*Assessment	*Off Site/Co-	*Tree
2892	tulip tree	14	14	4.62	60	Codominant	15	70	PRESERVE					X
2893	red maple	29	29	9.57	75	Codominant	25	70	REMOVE					
2894	red maple	18			0				PRESERVE	X				
2895	red maple	19	19	6.27	65	Codominant	20	60	PRESERVE	X				
2896	red maple	24	24	7.92	65	Codominant	20	50	REMOVE					X
2897	northern red oak	41	41	13.53	40	Codominant	20	20	REMOVE	X				
2898	black cherry	15	15	4.95	30				PRESERVE	X				
2899	red maple	14	14	4.62	75	Codominant	15	80	PRESERVE	X				
2900	black cherry	14	14	4.62	65	Codominant	15	50	PRESERVE	X				
2901	black cherry	20	20	6.6	65	Codominant	20	80	REMOVE					X
2902	sweet cherry	12	12	3.96	70	Codominant	15	70	PRESERVE	X				
2903	red maple	26	26	8.58	65	Codominant	20	70	REMOVE					X
2904	red maple	19	19	6.27	75	Codominant	20	70	PRESERVE	X				
2905	red maple	31	31	10.23	70	Codominant	25	70	REMOVE					X
2906	red maple	28	28	9.24	65	Codominant	25	50	REMOVE					X
2907	red maple	19	19	6.27	65	Codominant	20	30	REMOVE					X
2908	pin oak	37	37	12.21	65	Codominant	35	70	REMOVE					X
2909	pin oak	36	36	11.88	70	Codominant	30	60	REMOVE					X
2910	red maple	22			0				PRESERVE	X				
2911	red maple	24	24	7.92	50	Codominant	15	30	REMOVE					
2912	red maple	24	24	7.92	65	Codominant	20	50	REMOVE					X
2913	black cherry	11	11	3.63	70	Codominant	15	60	REMOVE					
2914	Leyland cypress	12	12	3.96	80	Isolated	15	80	REMOVE					
2915	hickory	25.6	26	8.58	80	Codominant	30	80	REMOVE					X
2916	hickory	14	14	4.62	80	Codominant	20	80	REMOVE					
2917	black cherry	13	13	4.29	75	Codominant	15	60	REMOVE					
2918	Leyland cypress	16	16	5.28	80	Intermediate	15	80	PRESERVE	X	X			
2919	red maple	51	51	16.83	60	Codominant	25	40	REMOVE					
2920	red maple	28	28	9.24	65	Codominant	25	60	REMOVE					

Tree #	Species	Size dbh	CRZ Critical Root Zone (radius ft)	SRZ Structural Rooting Zone (radius ft)	Condition %	Canopy Position	Crown Radius Avg. Radius (ft)	Crown Density %	Status	Activities				
										*Dead Tree	*Poor	*Assessment	*Off Site/Co-	*Tree
2926	red maple	17.8	19	6.27	60	Codominant	25	60	REMOVE					
2927	pin oak	24	24	7.92	75	Codominant	25	50	REMOVE					
2928	northern red oak	43	43	14.19	60	Codominant	35	50	REMOVE					X
2929	Norway spruce	20	20	6.6	60	Isolated	10	30	REMOVE					X
2930	northern red oak	35	35	11.55	75	Codominant	30	70	REMOVE					X
2931	black cherry	15	15	4.95	65	Codominant	15	10	REMOVE					
2932	black oak	21	21	6.93	70	Codominant	20	20	REMOVE					X
2933	sweet cherry	13	13	4.29	65	Codominant	15	20	REMOVE					X
2934	black oak	16	16	5.28	60	Codominant	15	20	PRESERVE	X				
2935	white oak	24	24	7.92	80	Codominant	25	40	PRESERVE	X				
2936	sweet cherry	13	13	4.29	80	Codominant	15	40	PRESERVE	X				
2937	flowering cherry	23	23	7.59	75	Isolated	20	80	PRESERVE	X	X			
2938	flowering cherry	14	14	4.62	75	Isolated	15	80	PRESERVE	X				
2939	black oak	19	19	6.27	75	Codominant	20	30	PRESERVE	X				

SHEET TP-20 TREE SUMMARY:
 TREES TO BE REMOVED = 27 THIS SHEET
 TREES TO BE PLANTED = 27 THIS SHEET
 NOTE: PROPOSED TREE PLANTING SHALL BE DIRECTED AND APPROVED BY FAIRFAX COUNTY.

TREE PRESERVATION PLAN LEGEND:

- EX TREE TO BE PRESERVED (OUTER CIRCLE IS CRITICAL ROOT ZONE)
- TREE TO BE REMOVED
- SSF TREE PROTECTION
- RP ROOT PRUNING
- LOD LIMITS OF DISTURBANCE

NOTE: SUPER SILT FENCE ALSO SERVES AS TREE PROTECTION

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
 SHEET CHK'D BY: A. YEAGLE
 CROSS CHK'D BY: C. HENEGAR
 APPROVED BY: C. HENEGAR
 DATE: AUGUST 2024

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 Fairfax, VA 22030
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 11100 Endeavor Court
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 Manassas, VA 20109

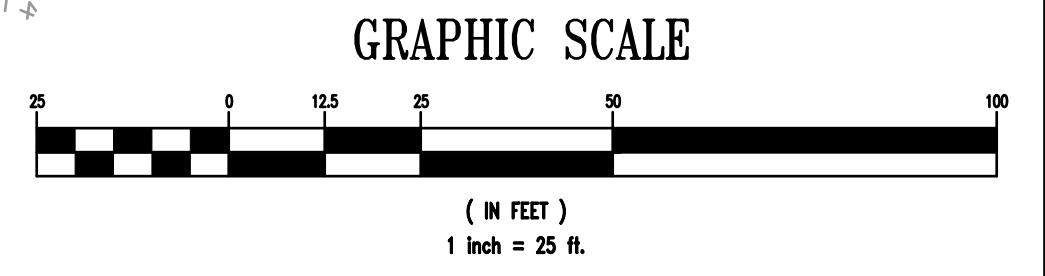
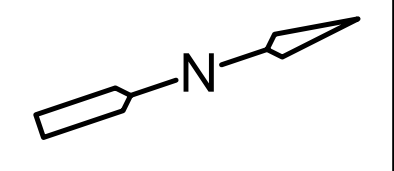
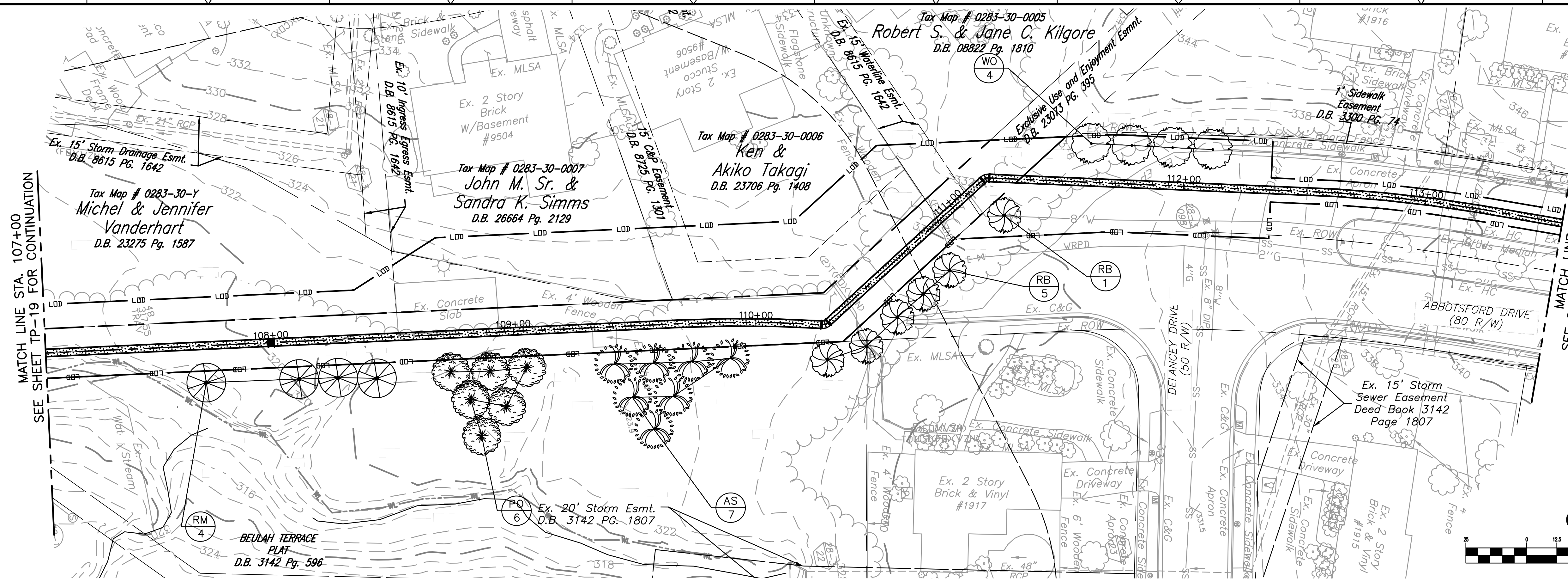
FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

TREE PRESERVATION PLAN
 STA 107+00 TO STA 113+50

PROJECT NO. 5003-244105
 FILE NAME: 3-22 TREE PRES
 SHEET NO. TP-20

MATCH LINE STA. 107+00
SEE SHEET TP-19 FOR CONTINUATION

MATCH LINE STA. 113+50
SEE SHEET TP-21 FOR CONTINUATION



PROPOSED PLANT LIST						
SYM.	ABBV.	QUAN.	COMMON NAME	BOTANICAL NAME	SIZE	ROOT
	RB	6	RIVER BIRCH	BETULA NIGRA	1" CAL.	B & B
	AS	7	AMERICAN SYCAMORE	PLATANUS OCCIDENTALIS	1" CAL.	B & B
	PO	6	PIN OAK	QUERCUS PALUSTRIS	1" CAL.	B & B
	WO	4	WILLOW OAK	QUERCUS PHELLOS	1" CAL.	B & B
	RM	4	RED MAPLE	ACER RUBRUM	1" CAL.	B & B

SEE SHEET TP-1 FOR FULL LIST OF PROPOSED PLANTINGS.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
 SHEET CHK'D BY: A. YEAGLE
 CROSS CHK'D BY: C. HENEGAR
 APPROVED BY: C. HENEGAR
 DATE: AUGUST 2024

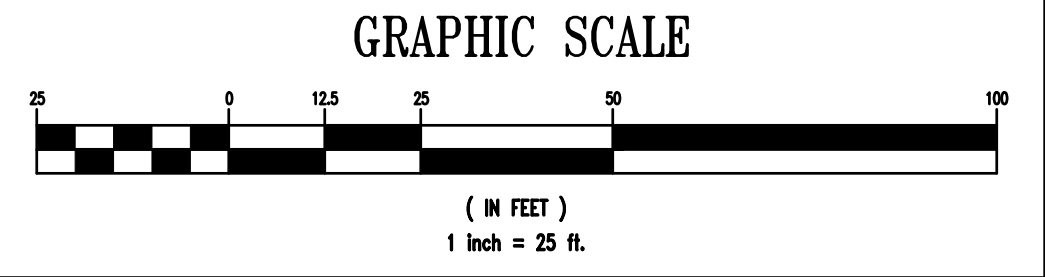
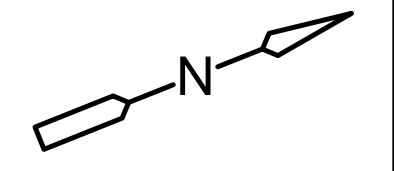
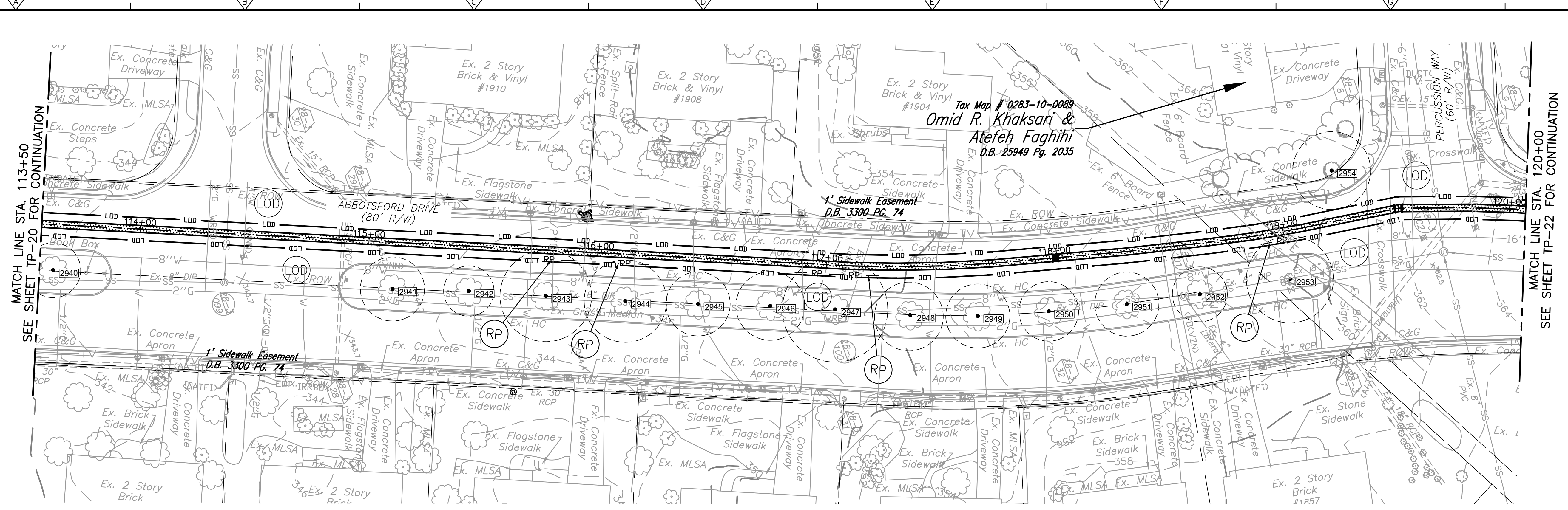
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FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

PLANTING PLAN
 STA 107+00 TO STA 113+50

PROJECT NO. 5003-244105
 FILE NAME: 3-22 TREE PRES
 SHEET NO.
 TP-20A



Tree #	Species	Size	CRZ	SRZ	Condition	Canopy Position	Crown Radius	Crown Density				Status	Activities				
		dbh	Critical Root Zone (radius ft)	Structural Rooting Zone (radius ft)	%		Avg. Radius (ft)	%	* Dead Tree	* Poor	* Assessment	* Off Site/Co-	* Tree	* Root Prune	* Monitor/Risk	* UFM/D Review	* Hand Removal
2940	flowering cherry	12	12	3.96	70	Isolated	15	80				PRESERVE	X				
2941	flowering cherry	14	14	4.62	75	Isolated	15	80				PRESERVE	X				
2942	flowering cherry	11	11	3.63	70	Isolated	15	80				PRESERVE	X				
2943	flowering cherry	20	20	6.6	70	Isolated	15	80				PRESERVE	X	X			
2944	flowering cherry	18	18	5.94	75	Isolated	20	80				PRESERVE	X	X			
2945	flowering cherry	14	14	4.62	75	Isolated	15	80				PRESERVE	X				
2946	flowering cherry	15	15	4.95	75	Isolated	15	80				PRESERVE	X				
2947	flowering cherry	23	23	7.59	70	Isolated	20	80				PRESERVE	X	X			
2948	flowering cherry	15	15	4.95	75	Isolated	20	80				PRESERVE	X				
2949	flowering cherry	14	14	4.62	75	Isolated	15	80				PRESERVE	X				
2950	flowering cherry	13	13	4.29	75	Isolated	15	80				PRESERVE	X				
2951	flowering cherry	14	14	4.62	75	Isolated	15	80				PRESERVE	X				
2952	flowering cherry	12	12	3.96	75	Isolated	15	80				PRESERVE	X				
2953	flowering cherry	19	19	6.27	80	Isolated	10	60				PRESERVE	X	X			
2954	eastern white pine	17	17	5.61	65	Codominant	15	80				PRESERVE	X				

SHEET TP-21 TREE SUMMARY:
 TREES TO BE REMOVED = 0 THIS SHEET
 TREES TO BE PLANTED = 0 THIS SHEET

NOTE: PROPOSED TREE PLANTING SHALL BE DIRECTED AND APPROVED BY FAIRFAX COUNTY.

TREE PRESERVATION PLAN LEGEND:

- 3000 (circle with dot) EX. TREE TO BE PRESERVED (OUTER CIRCLE IS CRITICAL ROOT ZONE)
- 3000 (circle with X) TREE TO BE REMOVED
- SSF (circle with XX) TREE PROTECTION
- RP (circle with RP) ROOT PRUNING
- LOD (line) LIMITS OF DISTURBANCE

NOTE: SUPER SILT FENCE ALSO SERVES AS TREE PROTECTION

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
 SHEET CHK'D BY: A. YEAGLE
 CROSS CHK'D BY: C. HENEGAR
 APPROVED BY: C. HENEGAR
 DATE: AUGUST 2024

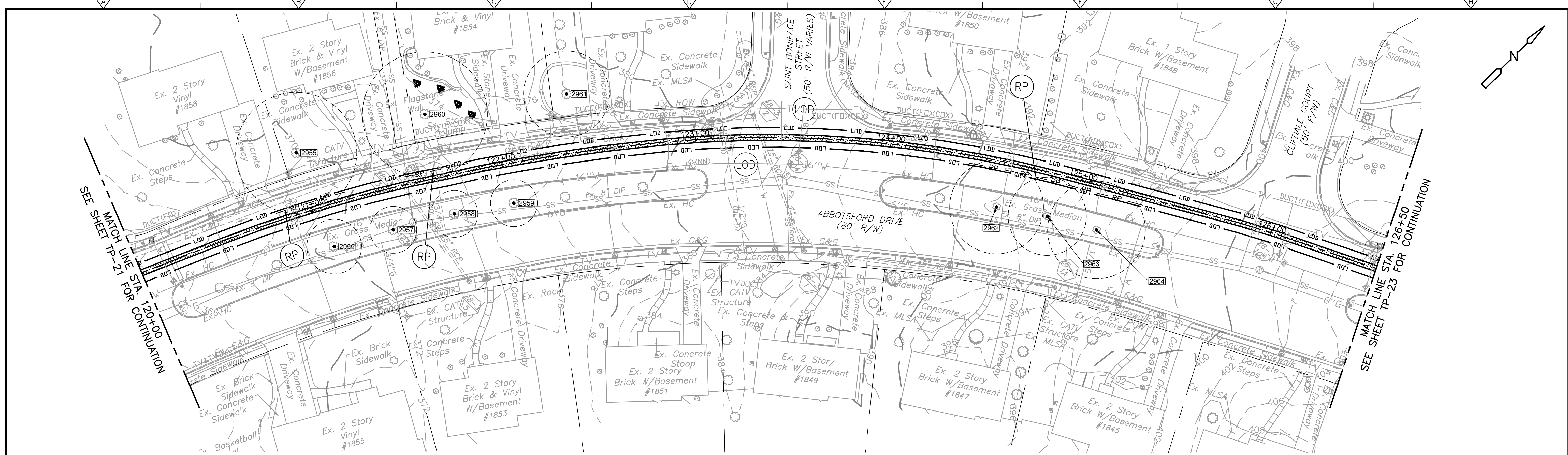
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FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

TREE PRESERVATION AND PLANTING PLAN
 STA 113+50 TO STA 120+00
 TP-21

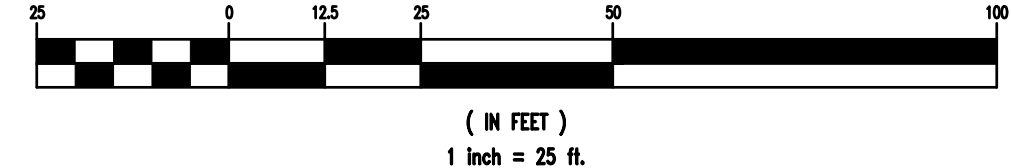
PROJECT NO. 5003-244105
 FILE NAME: 3-22 TREE PRES
 SHEET NO. TP-21



SEE SHEET TP-21 FOR CONTINUATION

SEE SHEET TP-23 FOR CONTINUATION

GRAPHIC SCALE

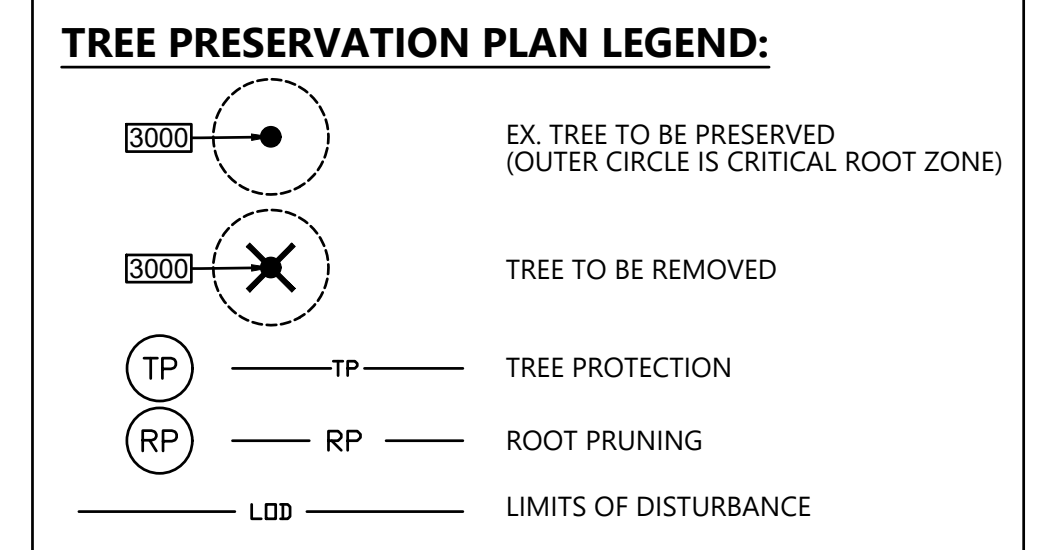


Tree #	Species	Size dbh	CRZ Critical Root Zone (radius ft)	SRZ Structural Rooting Zone (radius ft)	Condition %	Canopy Position	Crown Radius Avg. Radius (ft)	Crown Density %	*Dead Tree	*Poor	*Assessment	*Off Site/Co-	Status	Activities			
														*Tree	*Root Prune	*Monitor/Risk	*UFMD Review
2955	pin oak	31	31	10.23	70	Codominant	35	80					PRESERVE	X	X		
2956	Callery pear	14	14	4.62	70	Isolated	15	80					PRESERVE	X			
2957	Callery pear	12	12	3.96	75	Isolated	15	80					PRESERVE	X			
2958	Callery pear	12	12	3.96	75	Isolated	10	80					PRESERVE	X			
2959	Callery pear	12	12	3.96	75	Isolated	10	80					PRESERVE	X			
2960	red maple	32	32	10.56	65	Codominant	30	80					PRESERVE	X	X		
2961	Norway spruce	22	22	7.26	70	Codominant	15	70					PRESERVE	X			
2962	Callery pear	24	24	7.92	70	Isolated	15	80					PRESERVE	X	X		
2963	Callery pear	20	20	6.6	60	Isolated	15	80					PRESERVE	X	X		
2964	Callery pear	25	25	8.25	65	Isolated	15	80					PRESERVE	X	X		

SHEET TP-22 TREE SUMMARY:

TREES TO BE REMOVED = 0 THIS SHEET
TREES TO BE PLANTED = 0 THIS SHEET

NOTE: PROPOSED TREE PLANTING SHALL BE DIRECTED AND APPROVED BY FAIRFAX COUNTY.



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
DRAWN BY: A. NGUYEN
SHEET CHK'D BY: A. YEAGLE
CROSS CHK'D BY: C. HENEGAR
APPROVED BY: C. HENEGAR
DATE: AUGUST 2024

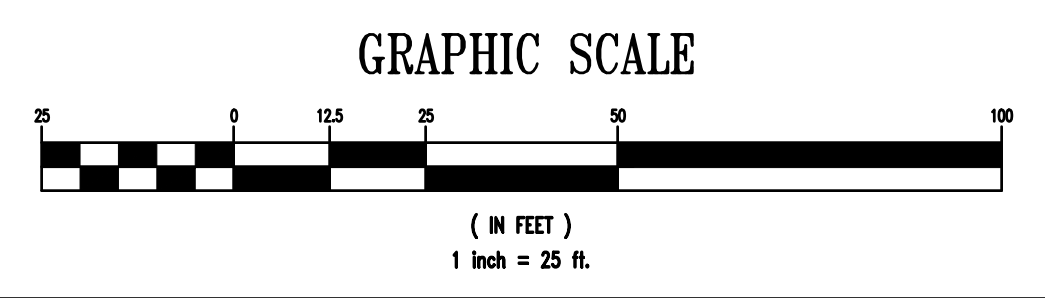
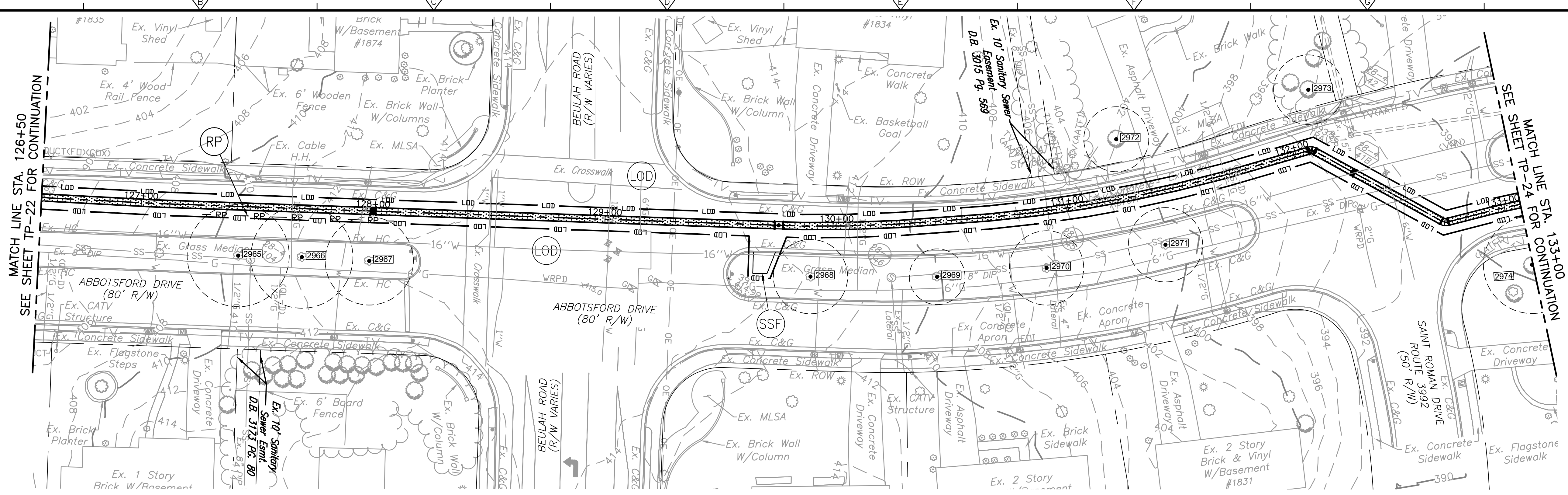
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TYSONS WASTEWATER CONVEYANCE SYSTEM
MODIFICATIONS
PACKAGE 4: FORCE MAIN

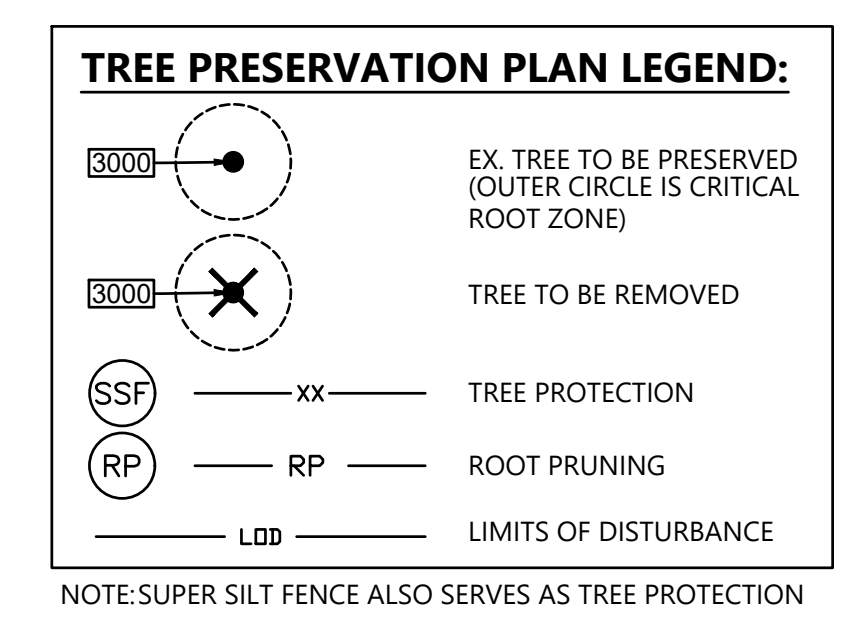
TREE PRESERVATION AND PLANTING PLAN
STA 120+00 TO STA 126+50

PROJECT NO. 5003-244105
FILE NAME:
SHEET NO. TP-22



Tree #	Species	Size dbh	CRZ Critical Root Zone (radius ft)	SRZ Structural Rooting Zone (radius ft)	Condition %	Canopy Position	Crown Radius Avg. Radius (ft)	Crown Density %	* Dead Tree	* Poor	* Assessment	* Off Site/Co-	Status	Activities			
														*Tree	*Root Prune	*Monitor/Risk	*UFMD Review
2965	Callery pear	22	22	7.26	70	Isolated	15	70					PRESERVE	X	X		
2966	Callery pear	22	22	7.26	60	Isolated	15	70					PRESERVE	X	X		
2967	Callery pear	19	19	6.27	65	Isolated	15	70					PRESERVE	X	X		
2968	red maple	16	16	5.28	70	Isolated	20	80					PRESERVE	X			
2969	red maple	12	12	3.96	70	Isolated	15	80					PRESERVE	X			
2970	red maple	16	16	5.28	65	Isolated	15	80					PRESERVE	X			
2971	red maple	16	16	5.28	65	Isolated	15	80					PRESERVE	X			
2972	flowering dogwood	14	14	4.62	80	Isolated	10	70					PRESERVE	X			
2973	Norway spruce	15	15	4.95	70	Codominant	15	50					PRESERVE	X			
2974	red maple	21	21	6.93	80	Codominant	25	70					PRESERVE	X			

SHEET TP-23 TREE SUMMARY:
 TREES TO BE REMOVED = 0 THIS SHEET
 TREES TO BE PLANTED = 0 THIS SHEET
 NOTE: PROPOSED TREE PLANTING SHALL BE DIRECTED AND APPROVED BY FAIRFAX COUNTY.



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
 SHEET CHK'D BY: A. YEAGLE
 CROSS CHK'D BY: C. HENEGAR
 APPROVED BY: C. HENEGAR
 DATE: AUGUST 2024

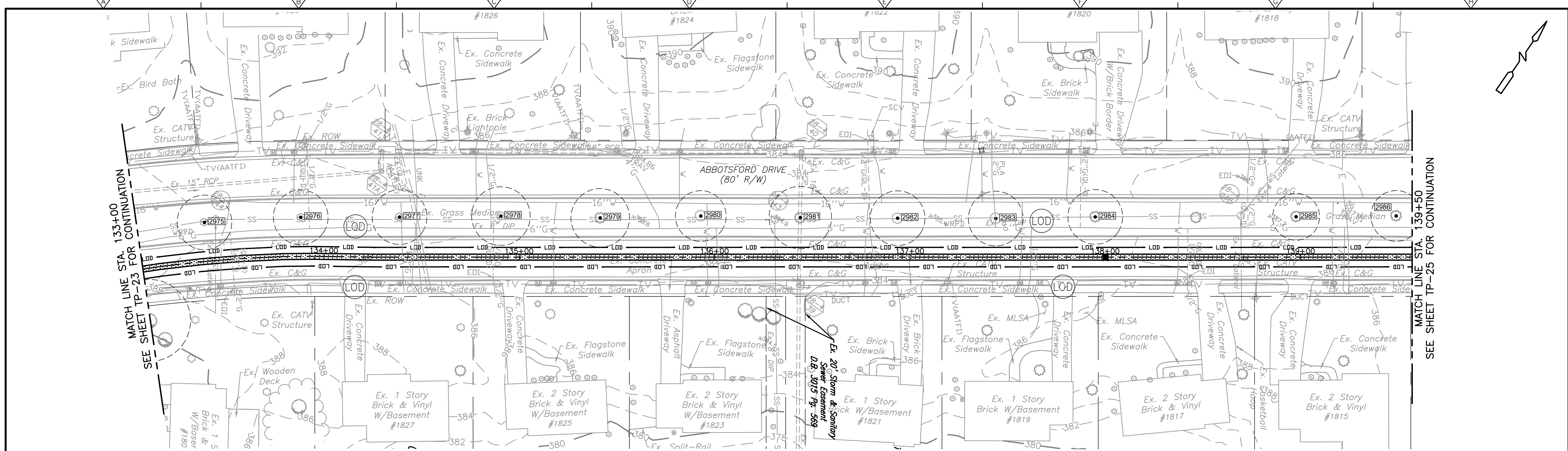
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FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

TREE PRESERVATION AND PLANTING PLAN
 STA 126+50 TO STA 133+00

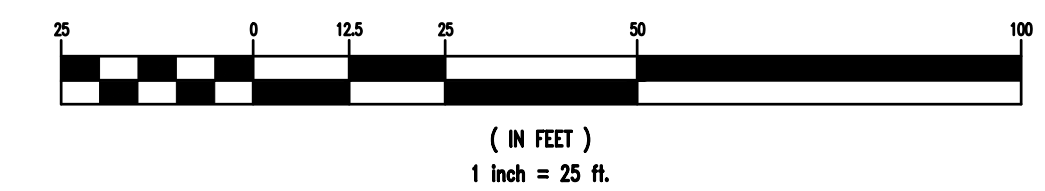
PROJECT NO. 5003-244105
 FILE NAME 23-32 TREE PRES
 SHEET NO. TP-23



MATCH LINE STA. 133+00
SEE SHEET TP-23 FOR CONTINUATION

MATCH LINE STA. 139+50
SEE SHEET TP-25 FOR CONTINUATION

GRAPHIC SCALE



Tree #	Species	Size dbh	CRZ Critical Root Zone (radius ft)	SRZ Structural Rooting Zone (radius ft)	Condition %	Canopy Position	Crown Radius (ft)	Crown Density %	*Dead Tree	*Poor	*Assessment	*Off Site/Co-	Status	Activities			
														*Tree	*Root Prune	*Monitor/Risk	*UFMD Review
2975	red maple	14	4.62	65	Isolated	15	80						PRESERVE X				
2976	red maple	14	4.62	65	Isolated	15	80						PRESERVE X				
2977	red maple	14	4.62	65	Isolated	15	80						PRESERVE X				
2978	red maple	15	4.95	65	Isolated	15	80						PRESERVE X				
2979	red maple	15	4.95	65	Isolated	15	80						PRESERVE X				
2980	red maple	13	4.29	65	Isolated	15	80						PRESERVE X				
2981	red maple	16	5.28	65	Isolated	15	80						PRESERVE X				
2982	red maple	14	4.62	30	Isolated	15	50		X				PRESERVE X				
2983	red maple	14	4.62	65	Isolated	15	80						PRESERVE X				
2984	red maple	14	4.62	65	Isolated	15	80						PRESERVE X				
2985	red maple	12	3.96	30	Isolated	15	20		X				PRESERVE X				
2986	red maple	13	4.29	65	Isolated	15	80						PRESERVE X				

SHEET TP-24 TREE SUMMARY:

TREES TO BE REMOVED = 0 THIS SHEET
 TREES TO BE PLANTED = 0 THIS SHEET
 NOTE: PROPOSED TREE PLANTING SHALL BE DIRECTED AND APPROVED BY FAIRFAX COUNTY.

TREE PRESERVATION PLAN LEGEND:

- EX. TREE TO BE PRESERVED (OUTER CIRCLE IS CRITICAL ROOT ZONE)
- TREE TO BE REMOVED
- TREE PROTECTION
- ROOT PRUNING
- LIMITS OF DISTURBANCE

NOTE: SUPER SILT FENCE ALSO SERVES AS TREE PROTECTION

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
 SHEET CHK'D BY: A. YEAGLE
 CROSS CHK'D BY: C. HENEGAR
 APPROVED BY: C. HENEGAR
 DATE: AUGUST 2024

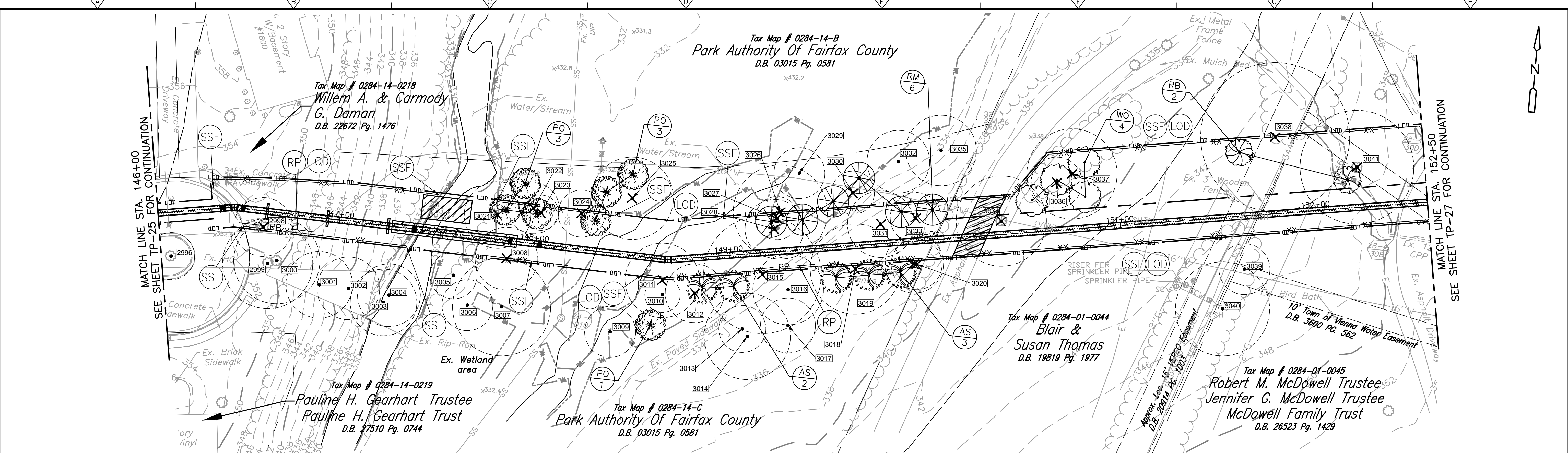
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 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

TREE PRESERVATION AND PLANTING PLAN
 STA 133+00 TO STA 139+50

PROJECT NO. 5003-244105
FILE NAME 23-32 TREE PRES
SHEET NO. TP-24



Tax Map # 0284-14-B
Park Authority Of Fairfax County
D.B. 03015 Pg. 0581

Tax Map # 0284-14-0218
Willem A. & Carmody
G. Daman
D.B. 22672 Pg. 1476

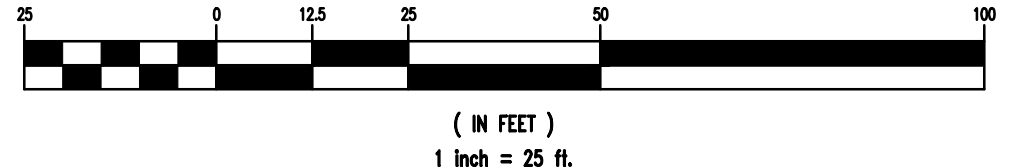
Tax Map # 0284-01-0044
Blair &
Susan Thomas
D.B. 19819 Pg. 1977

Tax Map # 0284-14-0219
Pauline H. Gearhart Trustee
Pauline H. Gearhart Trust
D.B. 17510 Pg. 0744

Tax Map # 0284-14-C
Park Authority Of Fairfax County
D.B. 03015 Pg. 0581

Tax Map # 0284-01-0045
Robert M. McDowell Trustee
Jennifer G. McDowell Trustee
McDowell Family Trust
D.B. 26523 Pg. 1429

GRAPHIC SCALE



Tree #	Species	Size	CRZ	SRZ	Condition	Canopy Position	Crown Radius	Crown Density	*Dead Tree	*Poor	*Assessment	*Off Site/Co.	Status	Activities				
														*Tree	*Root Prune	*Monitor/Risk	*UFMD Review	*Hand Removal
2996	red maple	12	12	3.96	65	Isolated	15	80					PRESERVE	X				
2998	Norway spruce	15	15	4.95	75	Intermediate	15	70					REMOVE					
2999	American sycamore	23	23	7.59	75	Codominant	25	60					PRESERVE		X			
3000	American sycamore	22	22	7.26	75	Codominant	25	60					PRESERVE	X				
3001	red maple	17	17	5.61	70	Codominant	20	70					PRESERVE	X				
3002	American sycamore	16	16	5.28	70	Codominant	20	70					PRESERVE	X				
3003	American sycamore	17	17	5.61	70	Codominant	15	80					PRESERVE	X				
3004	tulip tree	16	16	5.28	70	Codominant	15	50					PRESERVE	X				
3205	silver maple	34	34	11.22	75	Isolated	35	80					PRESERVE	X				
3005	American sycamore	12	12	3.96	75	Codominant	15	70					PRESERVE					X
3006	red maple	13	13	4.29	65	Codominant	15	60					PRESERVE	X				
3007	red maple	25	25	8.25	55	Codominant	25	80					PRESERVE	X	X			
3008	green ash	16			0				X				REMOVE					
3009	red maple	13	13	4.29	75	Codominant	15	60					PRESERVE	X				
3010	red maple	9	9	2.97	70	Codominant	10	40					PRESERVE					
3011	pin oak	19	19	6.27	65	Codominant	20	60					REMOVE					
3012	red maple	15	15	4.95	75	Codominant	20	60					REMOVE					
3013	red maple	12	12	3.96	75	Codominant	15	40					PRESERVE	X				
3014	red maple	22	22	7.26	75	Codominant	25	60					PRESERVE	X				
3015	red maple	30	30	9.9	60	Codominant	10	20					REMOVE					
3016	tulip tree	18	18	5.94	80	Codominant	20	70					PRESERVE		X			
3017	red maple	14	14	4.62	75	Codominant	15	60					PRESERVE	X				
3018	red maple	23	23	7.59	75	Codominant	35	80					REMOVE					
3019	eastern red cedar	15	15	4.95	70	Codominant	10	60					REMOVE					
3020	red maple	10.8	13	4.29	70	Codominant	15	60					REMOVE					
3021	red maple	14, 10	17	5.61	40	Codominant	10	30			X		REMOVE					
3022	red maple	13	13	4.29	70	Codominant	15	60					REMOVE					
3023	red maple	9	9	2.97	55	Codominant	5	40					REMOVE					
3024	green ash	12	12	3.96	70	Codominant	20	70					REMOVE					
3025	elm spp.	21	21	6.93	70	Codominant	20	60					REMOVE					
3026	red maple	14, 14, 13	24	7.92	70	Codominant	25	70					REMOVE					X
3027	red maple	11	11	3.63	70	Codominant	15	60					REMOVE					

Tree #	Species	Size	CRZ	SRZ	Condition	Canopy Position	Crown Radius	Crown Density	*Dead Tree	*Poor	*Assessment	*Off Site/Co.	Status	Activities				
														*Tree	*Root Prune	*Monitor/Risk	*UFMD Review	*Hand Removal
3028	tulip tree	15	15	4.95	70	Codominant	15	40					REMOVE					
3029	red maple	13	13	4.29	75	Codominant	15	70					PRESERVE	X				
3030	red maple	11	11	3.63	75	Codominant	15	40					REMOVE					
3031	red maple	16.7	17	5.61	75	Codominant	25	80					REMOVE					
3032	red maple	16	16	5.28	75	Codominant	25	60					PRESERVE	X				
3033	red maple	13	13	4.29	80	Codominant	15	70					REMOVE					
3034	American sycamore	23	23	7.59	80	Codominant	20	80					REMOVE					
3035	pin oak	18	18	5.94	70	Intermediate	25	60					PRESERVE	X				
3036	red maple	13	13	4.29	75	Codominant	20	60					REMOVE					X
3037	tulip tree	23	23	7.59	85	Codominant	25	80					REMOVE					X
3038	red maple	38	38	12.54	70	Codominant	35	80					REMOVE					X
3039	red maple	13	13	4.29	75	Codominant	15	70					PRESERVE	X				
3040	tulip tree	24	24	7.92	80	Codominant	20	80					PRESERVE	X				
3041	American sycamore	29	29	9.57	80	Codominant	25	70					REMOVE					X

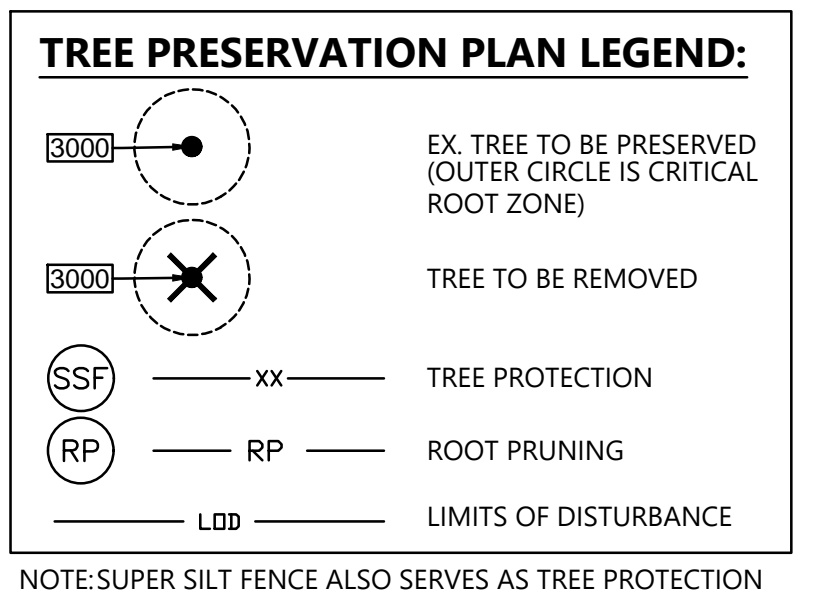
SYM.	ABBV.	QUAN.	COMMON NAME	BOTANICAL NAME	SIZE	ROOT
	RB	2	RIVER BIRCH	BETULA NIGRA	1" CAL.	B & B
	AS	5	AMERICAN SYCAMORE	PLATANUS OCCIDENTALIS	1" CAL.	B & B
	PO	7	PIN OAK	QUERCUS PALUSTRIS	1" CAL.	B & B
	WO	4	WILLOW OAK	QUERCUS PHELLOS	1" CAL.	B & B
	RM	6	RED MAPLE	ACER RUBRUM	1" CAL.	B & B

SEE SHEET TP-1 FOR FULL LIST OF PROPOSED PLANTINGS.

SHEET TP-26 TREE SUMMARY:

TREES TO BE REMOVED = 24 THIS SHEET
TREES TO BE PLANTED = 24 THIS SHEET

NOTE: PROPOSED TREE PLANTING SHALL BE DIRECTED AND APPROVED BY FAIRFAX COUNTY.



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
DRAWN BY: A. NGUYEN
SHEET CHK'D BY: A. YEAGLE
CROSS CHK'D BY: C. HENEGAR
APPROVED BY: C. HENEGAR
DATE: AUGUST 2024

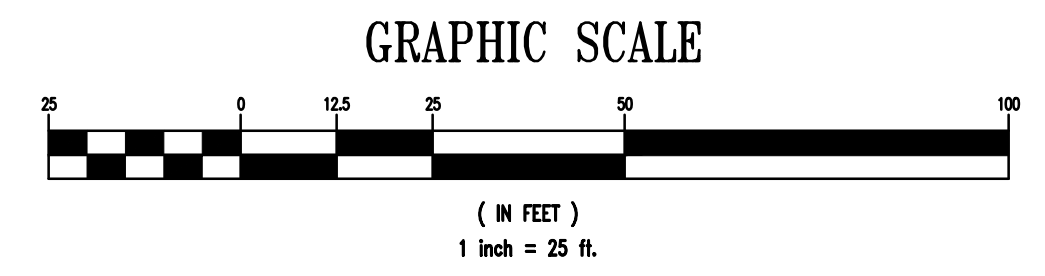
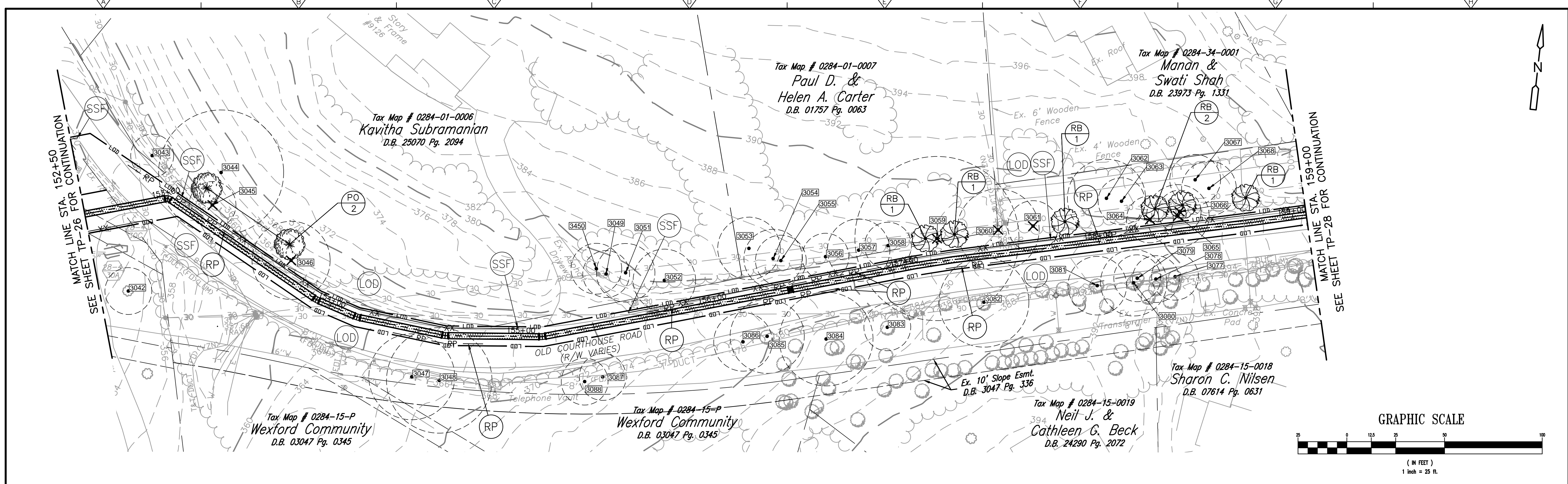
CDM Smith
10306 Eaton Place, Suite 500
Fairfax, VA 22030
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RINKER DESIGN ASSOC.
11100 Endeavor Court
Suite 200
Manassas, VA 20109

FAIRFAX COUNTY, VIRGINIA
DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
TYSONS WASTEWATER CONVEYANCE SYSTEM
MODIFICATIONS
PACKAGE 4: FORCE MAIN

TREE PRESERVATION AND PLANTING PLAN
STA 146+00 TO STA 152+50

PROJECT NO. 5003-244105
FILE NAME 23-32 TREE PRES
SHEET NO. TP-26



TREE INVENTORY NOTE: TREE LABEL 3050 IS NOT USED.

Tree #	Species	Size dbh	CRZ	SRZ	Condition %	Canopy Position	Crown Radius Avg. Radius (ft)	Crown Density %	*Dead Tree	*Poor	*Assessment	*Off Site/Co-	Status	Activities				
														*Tree	*Root/Prune	*Monitor/Risk	*UFMD Review	*Hand Removal
3042	black cherry	12	12	3.96	60	Codominant	10	40					PRESERVE	X				
3043	tulip tree	11	11	3.63	40	Isolated	10	20	X				PRESERVE	X	X			
3044	scarlet oak	23,22	32	10.56	45	Intermediate	20	40	X				PRESERVE	X		X		
3045	white oak	12	12	3.96	65	Intermediate	10	50					REMOVE					X
3046	white oak	20	20	6.6	50	Codominant	15	30					REMOVE					X
3047	scarlet oak	22	22	7.26	70	Codominant	25	70					PRESERVE	X	X			
3048	green ash	27			0				X				PRESERVE	X	X			
3049	blackgum	11,5	12	3.96	65	Codominant	10	30					PRESERVE	X				
3051	black cherry	15	15	4.95	60	Codominant	15	30					PRESERVE	X				
3052	white oak	12,10	16	5.28	60	Codominant	15	40					PRESERVE	X	X			
3053	eastern red cedar	13,9	16	5.28	75	Codominant	15	70					PRESERVE	X				
3054	white oak	15	15	4.95	65	Codominant	20	70					PRESERVE	X	X	X		
3055	white oak	13	13	4.29	40	Codominant	10	30	X				PRESERVE	X	X	X		
3056	hickory	12	12	3.96	70	Codominant	20	70					PRESERVE	X	X	X		
3057	pin oak	16	16	5.28	50	Codominant	15	40					PRESERVE	X	X	X		
3058	scarlet oak	12	12	3.96	65	Codominant	15	40					PRESERVE	X	X	X		
3059	northern red oak	42	42	13.86	65	Codominant	35	80					REMOVE					X
3060	flowering cherry	21			0				X				REMOVE					X
3061	flowering cherry	12,6	13	4.29	35	Codominant	5	10	X				REMOVE					X
3062	Callery pear	14,14	20	6.6	55	Codominant	20	50					PRESERVE	X	X			
3063	Callery pear	12	12	3.96	65	Codominant	15	40					PRESERVE	X				
3064	black cherry	10,6	12	3.96	55	Codominant	10	20					REMOVE					X
3065	hickory	16	16	5.28	65	Codominant	15	70					REMOVE					X
3066	black cherry	11			0				X				REMOVE					X
3067	eastern red cedar	13	13	4.29	65	Codominant	15	40					PRESERVE	X				
3068	Callery pear	12,8	14	4.62	60	Codominant	20	70					PRESERVE	X				

Tree #	Species	Size dbh	CRZ	SRZ	Condition %	Canopy Position	Crown Radius Avg. Radius (ft)	Crown Density %	*Dead Tree	*Poor	*Assessment	*Off Site/Co-	Status	Activities				
														*Tree	*Root/Prune	*Monitor/Risk	*UFMD Review	*Hand Removal
3077	black cherry	12			0				X				PRESERVE	X				
3078	black cherry	12	12	3.96	40	Intermediate	5	20		X			PRESERVE	X				
3079	northern red oak	12	12	3.96	45	Intermediate	5	10		X			PRESERVE	X				
3080	black cherry	14,9	17	5.61	50	Intermediate	15	30					PRESERVE	X				
3081	red maple	15	15	4.95	35	Intermediate	5	20		X			PRESERVE	X				
3082	red maple	15,14,11	23	7.59	50	Codominant	20	30					PRESERVE	X	X			
3083	eastern red cedar	12	12	3.96	60	Codominant	15	20					PRESERVE	X				
3084	green ash	24			0				X				PRESERVE	X				
3085	black cherry	19	19	6.27	60	Codominant	20	30					PRESERVE	X	X			
3086	black oak	15	15	4.95	65	Codominant	15	30					PRESERVE	X				
3087	tulip tree	12	12	3.96	75	Codominant	15	80					PRESERVE	X				
3088	tulip tree	12	12	3.96	75	Codominant	15	60					PRESERVE	X				
3450	blackgum	13	13	4.29	75	Codominant	20	60					PRESERVE	X				

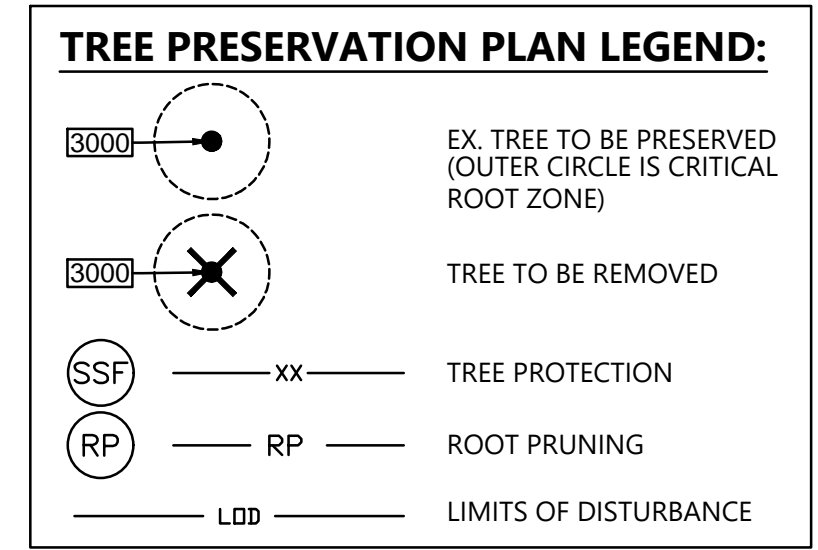
SYM.	ABBY.	QUAN.	COMMON NAME	BOTANICAL NAME	SIZE	ROOT
	RB	6	RIVER BIRCH	BETULA NIGRA	1" CAL.	B & B
	PO	2	PIN OAK	QUERCUS PALUSTRIS	1" CAL.	B & B

SEE SHEET TP-1 FOR FULL LIST OF PROPOSED PLANTINGS.

SHEET TP-27 TREE SUMMARY:

TREES TO BE REMOVED = 8 THIS SHEET
TREES TO BE PLANTED = 8 THIS SHEET

NOTE: PROPOSED TREE PLANTING SHALL BE DIRECTED AND APPROVED BY FAIRFAX COUNTY.



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
DRAWN BY: A. NGUYEN
SHEET CHK'D BY: A. YEAGLE
CROSS CHK'D BY: C. HENEGAR
APPROVED BY: C. HENEGAR
DATE: AUGUST 2024

10306 Eaton Place, Suite 500
Fairfax, VA 22030
Tel: (703) 691-6500

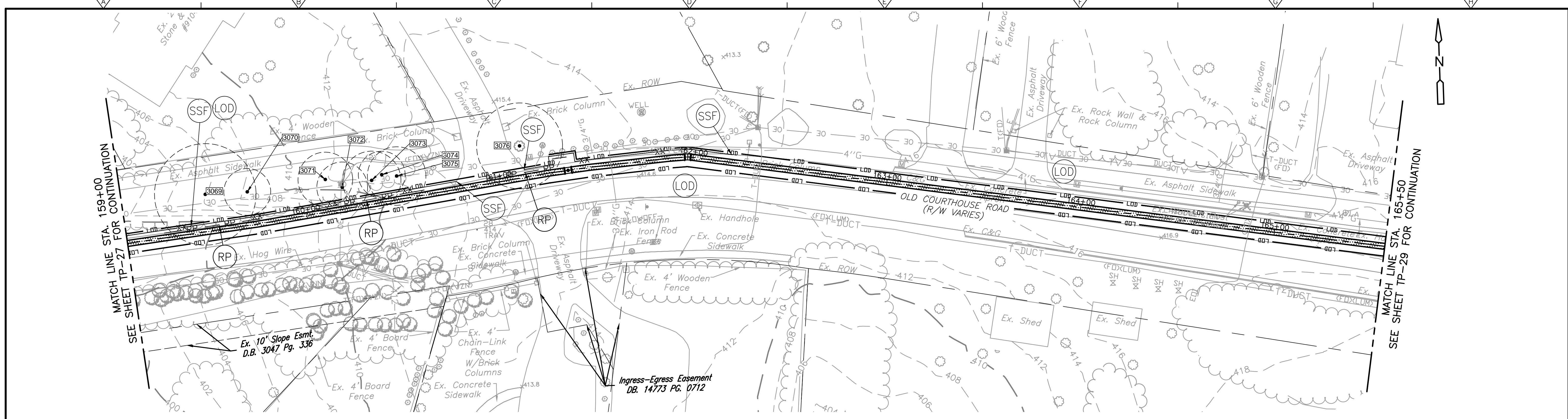
RINKER DESIGN ASSOC.
11102 Endeavor Court
Suite 200
Manassas, VA 20109

FAIRFAX COUNTY, VIRGINIA
DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
TYSONS WASTEWATER CONVEYANCE SYSTEM
MODIFICATIONS
PACKAGE 4: FORCE MAIN

PROJECT NO. 5003-244105
FILE NAME 23-32 TREE PRES
SHEET NO. TP-27

TREE PRESERVATION AND PLANTING PLAN
STA 152+50 TO STA 159+00

70% DESIGN SUBMITTAL - NOT FOR CONSTRUCTION



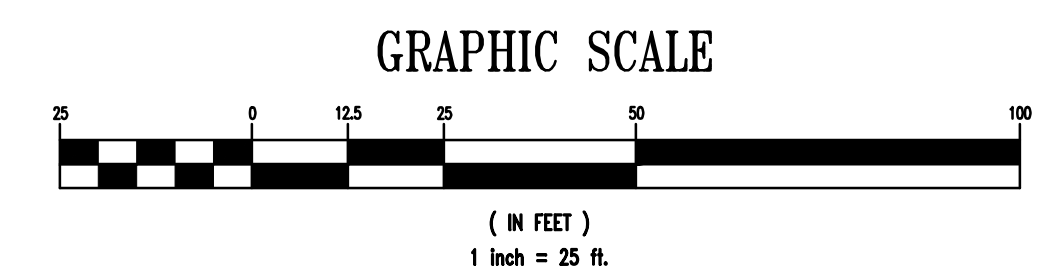
Tree #	Species	Size dbh	CRZ Critical Root Zone (radius ft)	SRZ Structural Rooting Zone (radius ft)	Condition %	Canopy Position	Crown Radius Avg. Radius (ft)	Crown Density %	* Dead Tree	* Poor	* Assessment	* Off Site/Co-	Status	Activities					
														*Tree	*Root Prune	*Monitor/Risk	*UFMD Review	*Hand Removal	
3069	Callery pear	24,10	26	8.58	65	Codominant	25	70					PRESERVE	X	X				
3070	black cherry	12	12	3.96	65	Codominant	20	60					PRESERVE	X	X				
3071	white mulberry	12,7	14	4.62	65	Codominant	20	70					PRESERVE	X	X				
3072	Callery pear	13	13	4.29	70	Codominant	15	50					PRESERVE	X	X				
3073	Virginia pine	15	15	4.95	65	Codominant	15	50					PRESERVE	X	X				
3074	Virginia pine	12	12	3.96	65	Codominant	10	70					PRESERVE	X	X				
3075	Virginia pine	15	15	4.95	65	Codominant	15	60					PRESERVE	X	X				
3076	Virginia pine	22			0				X				PRESERVE		X				

TREE PRESERVATION PLAN LEGEND:

- EX. TREE TO BE PRESERVED (OUTER CIRCLE IS CRITICAL ROOT ZONE)
- TREE TO BE REMOVED
- TREE PROTECTION
- ROOT PRUNING
- LIMITS OF DISTURBANCE

NOTE: SUPER SILT FENCE ALSO SERVES AS TREE PROTECTION

SHEET TP-28 TREE SUMMARY:
 TREES TO BE REMOVED = 0 THIS SHEET
 TREES TO BE PLANTED = 0 THIS SHEET



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
 SHEET CHK'D BY: A. YEAGLE
 CROSS CHK'D BY: C. HENEGAR
 APPROVED BY: C. HENEGAR
 DATE: AUGUST 2024

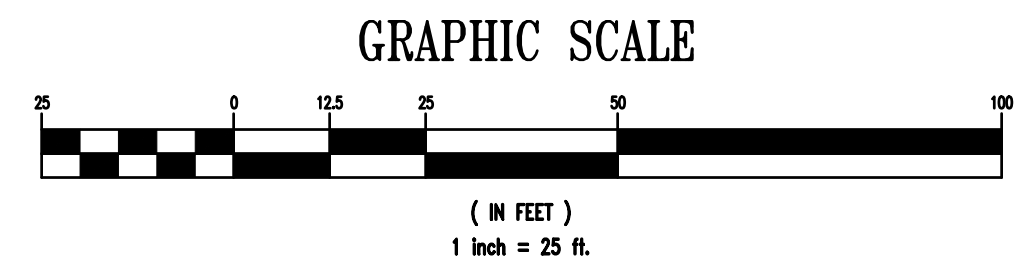
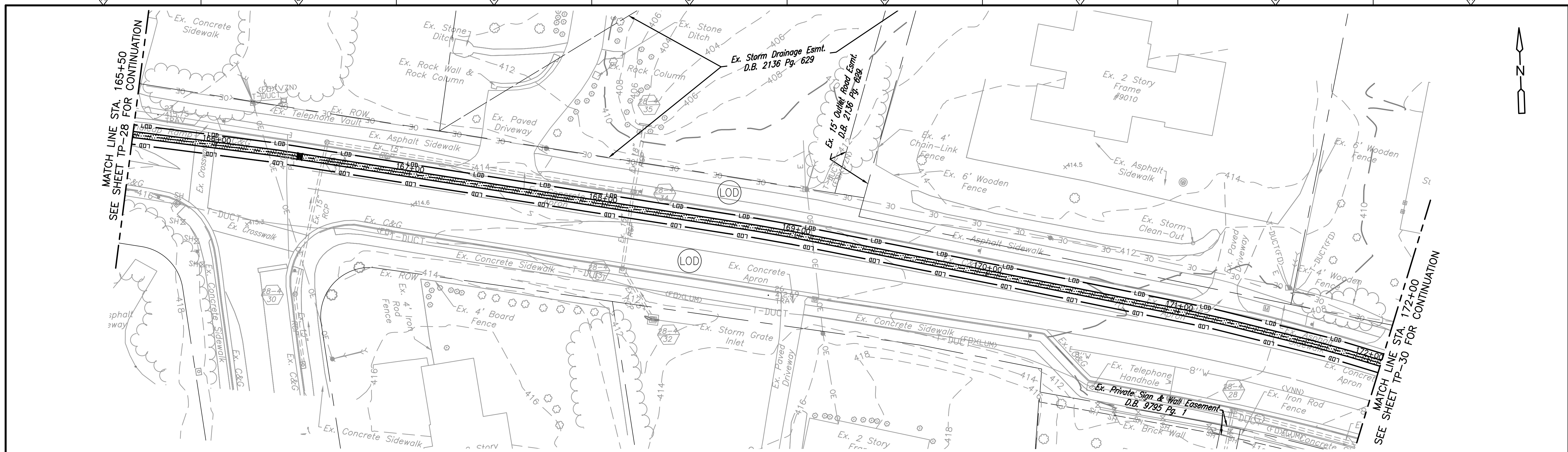
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FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

TREE PRESERVATION AND PLANTING PLAN
 STA 159+00 TO STA 165+50

PROJECT NO. 5003-244105 FILE NAME 23-32 TREE PRES
SHEET NO. TP-28



SHEET TP-29 TREE SUMMARY:
 TREES TO BE REMOVED = 0 THIS SHEET
 TREES TO BE PLANTED = 0 THIS SHEET

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
 SHEET CHK'D BY: A. YEAGLE
 CROSS CHK'D BY: C. HENEGAR
 APPROVED BY: C. HENEGAR
 DATE: AUGUST 2024

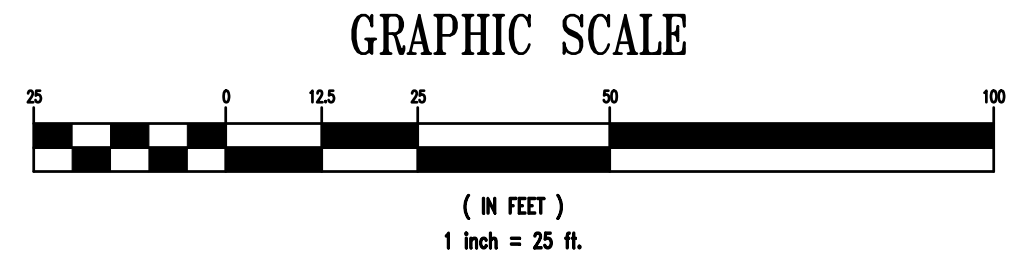
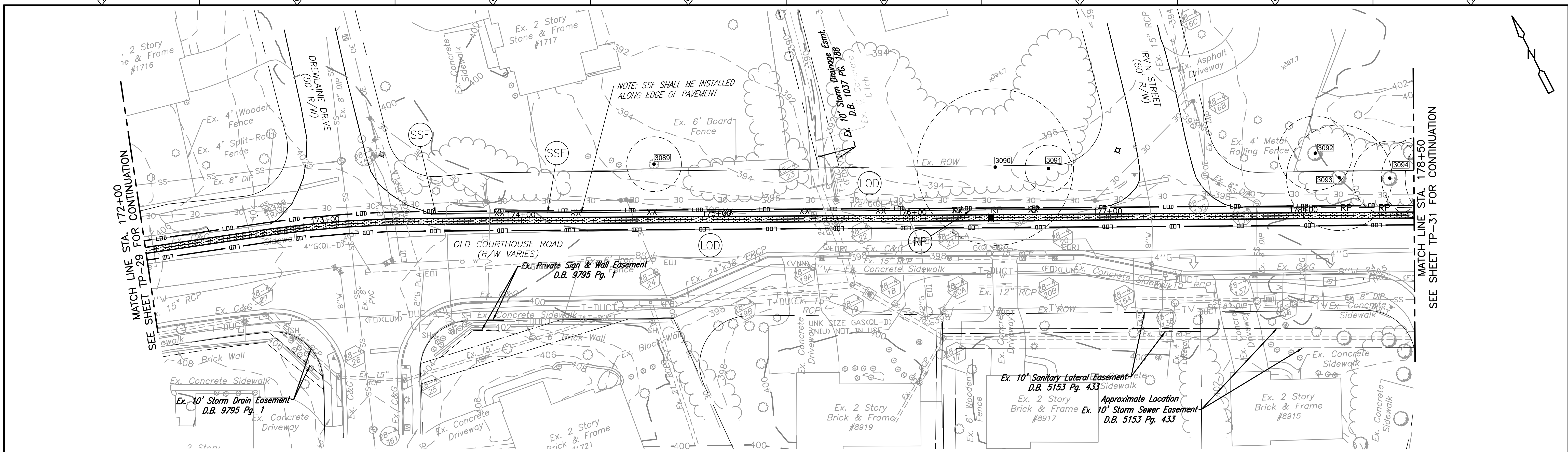
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 10306 Eaton Place, Suite 500
 Fairfax, VA 22030
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FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

TREE PRESERVATION
 AND PLANTING PLAN
 STA 165+50 TO STA 172+00

PROJECT NO. 5003-244105 FILE NAME 23-32 TREE PRES
SHEET NO. TP-29



Tree #	Species	Size	CRZ	SRZ	Condition	Canopy Position	Crown Radius	Crown Density	* Dead Tree	* Poor	* Assessment	* Off Site/Co-	Status	Activities				
														*Root Prune	*Monitor/Risk	*UFMD Review	*Hand Removal	
3089	flowering cherry	14	14	4.62	65	Codominant	15	60					PRESERVE	X				
3090	black locust	30.26			0				X				PRESERVE	X	X			
3091	American elm	12	12	3.96	65	Codominant	15	60					PRESERVE	X				
3092	American holly	15.12	19	6.27	75	Intermediate	15	80					PRESERVE	X				
3093	eastern white pine	27	27	8.91	65	Codominant	15	50					PRESERVE	X	X			
3094	eastern white pine	19	19	6.27	65	Codominant	10	40					PRESERVE	X	X			

SHEET TP-30 TREE SUMMARY:

TREES TO BE REMOVED = 0 THIS SHEET
 TREES TO BE PLANTED = 0 THIS SHEET

TREE PRESERVATION PLAN LEGEND:

- EX. TREE TO BE PRESERVED (OUTER CIRCLE IS CRITICAL ROOT ZONE)
- TREE TO BE REMOVED
- TREE PROTECTION
- ROOT PRUNING
- LIMITS OF DISTURBANCE

NOTE: SUPER SILT FENCE ALSO SERVES AS TREE PROTECTION

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
 SHEET CHK'D BY: A. YEAGLE
 CROSS CHK'D BY: C. HENEGAR
 APPROVED BY: C. HENEGAR
 DATE: AUGUST 2024

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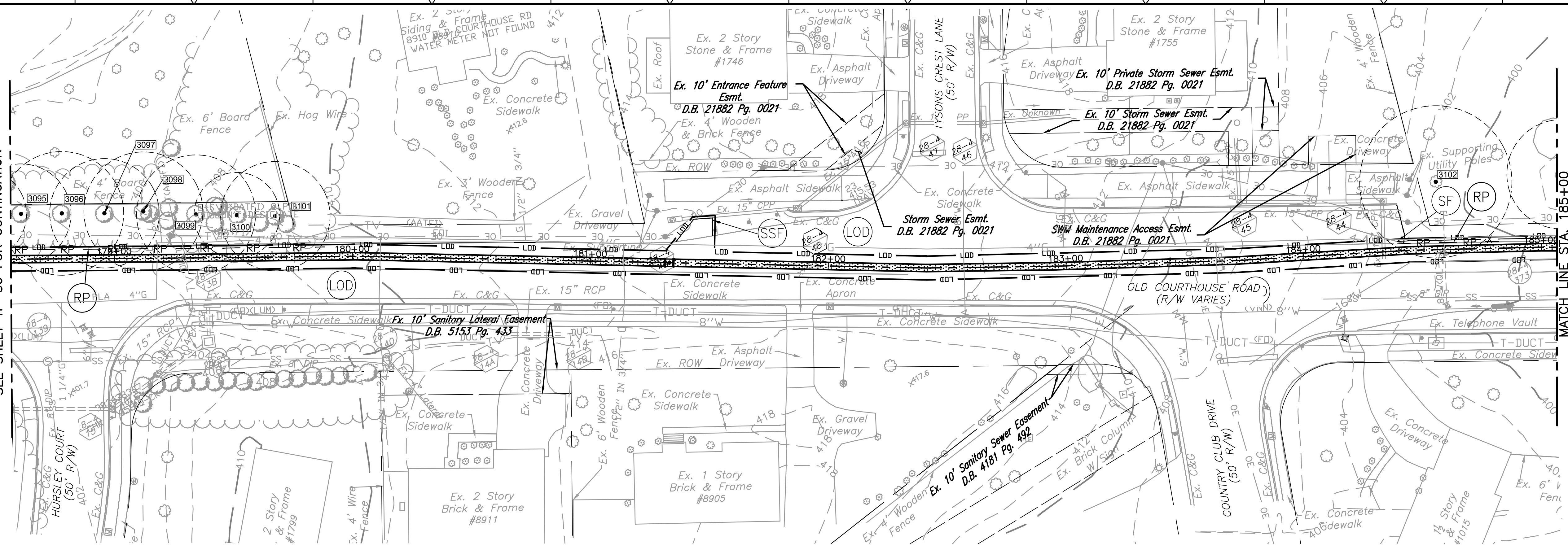
FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

TREE PRESERVATION AND PLANTING PLAN
 STA 172+00 TO STA 178+50

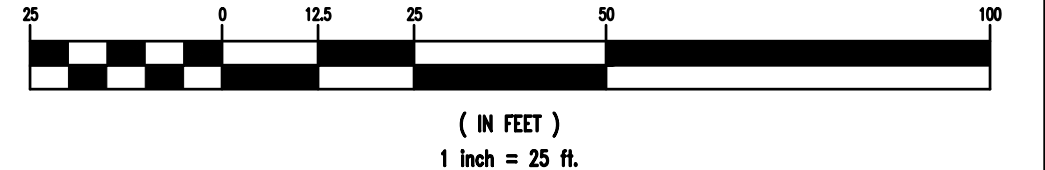
PROJECT NO. 5003-244105
 FILE NAME 23-32 TREE PRES
 SHEET NO. TP-30

MATCH LINE STA. 178+50
SEE SHEET TP-30 FOR CONTINUATION

MATCH LINE STA. 185+00
SEE SHEET TP-32 FOR CONTINUATION



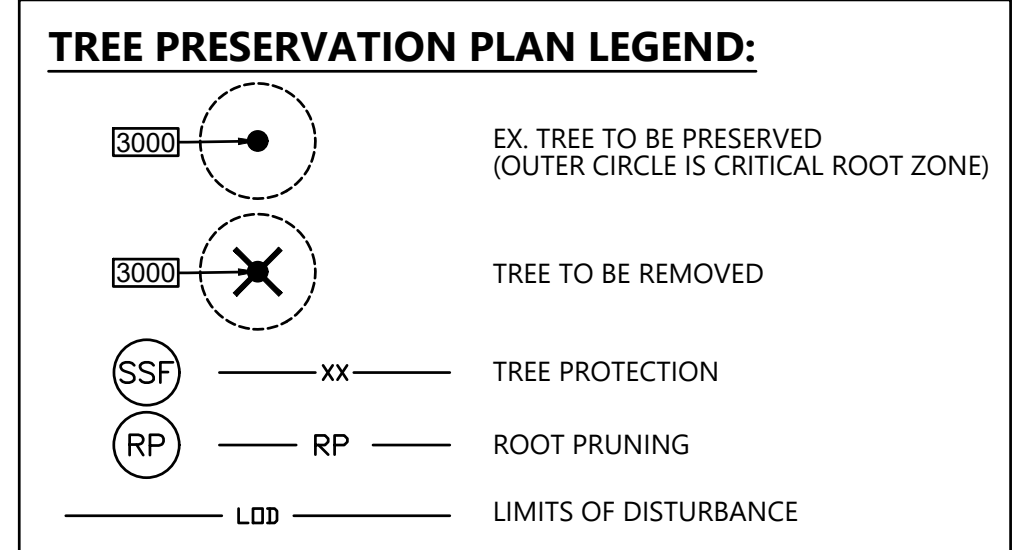
GRAPHIC SCALE



Tree #	Species	Size	CRZ	SRZ	Condition	Canopy Position	Crown Radius	Crown Density	Status	Activities									
										dbh	Critical Root Zone (radius ft)	Structural Rooting Zone (radius ft)	%	Avg. Radius (ft)	%	*Dead Tree	*Poor	*Assessment	*Off Site/Co-
3095	eastern white pine	21	21	6.93	55	Codominant	10	40	PRESERVE	X	X								
3096	eastern white pine	26	26	8.58	65	Codominant	15	40	PRESERVE	X	X								
3097	eastern white pine	23	23	7.59	60	Codominant	15	40	PRESERVE	X	X								
3098	eastern white pine	25	25	8.25	65	Codominant	15	40	PRESERVE	X	X								
3099	eastern white pine	25	25	8.25	65	Codominant	15	40	PRESERVE	X	X								
3100	eastern white pine	18	18	5.94	65	Codominant	15	40	PRESERVE	X	X								
3101	eastern white pine	23	23	7.59	30	Codominant	5	10	PRESERVE	X	X								
3102	sweetgum	32	32	10.56	75	Codominant	25	60	PRESERVE	X									

SHEET TP-31 TREE SUMMARY:

TREES TO BE REMOVED = 0 THIS SHEET
TREES TO BE PLANTED = 0 THIS SHEET



NOTE: SUPER SILT FENCE IS PROVIDED AS TREE PROTECTION

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
DRAWN BY: A. NGUYEN
SHEET CHK'D BY: A. YEAGLE
CROSS CHK'D BY: C. HENEGAR
APPROVED BY: C. HENEGAR
DATE: AUGUST 2024

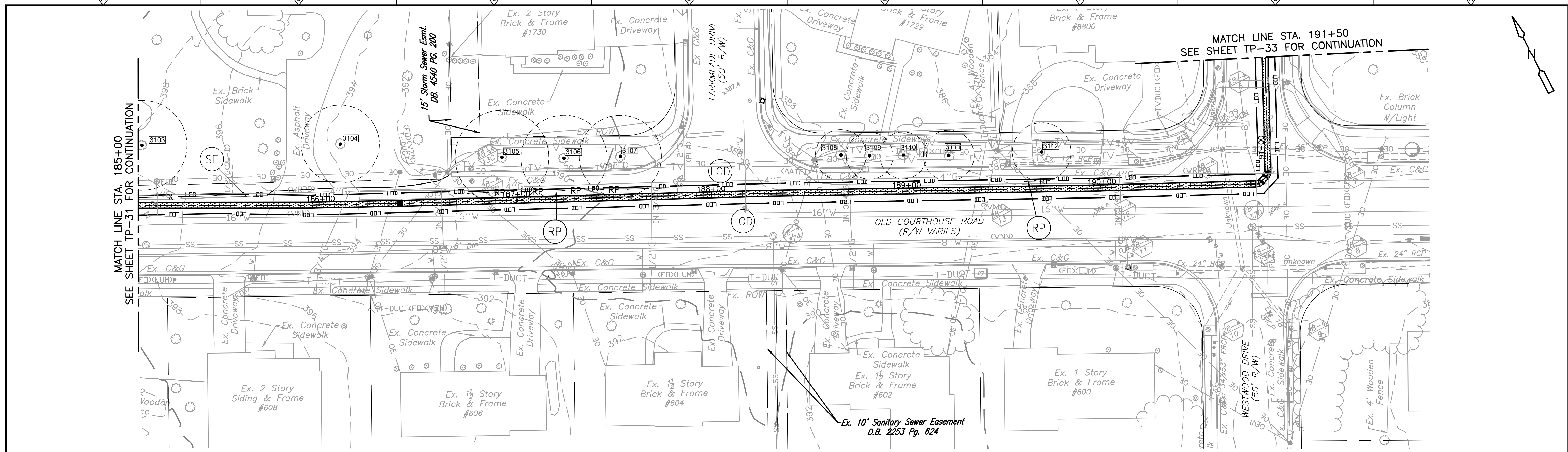
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FAIRFAX COUNTY, VIRGINIA
DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
TYSONS WASTEWATER CONVEYANCE SYSTEM
MODIFICATIONS
PACKAGE 4: FORCE MAIN

TREE PRESERVATION AND PLANTING PLAN
STA 178+50 TO STA 185+00

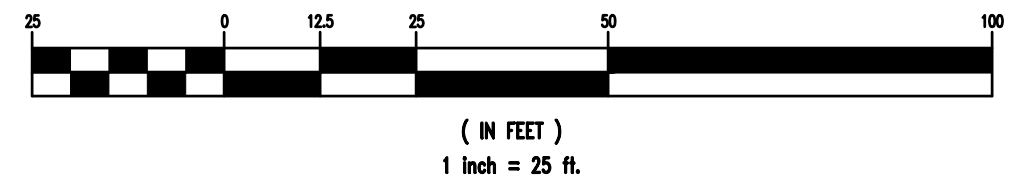
PROJECT NO. 5003-244105
FILE NAME 23-32 TREE PRES
SHEET NO.
TP-31



MATCH LINE STA. 191+50
SEE SHEET TP-33 FOR CONTINUATION

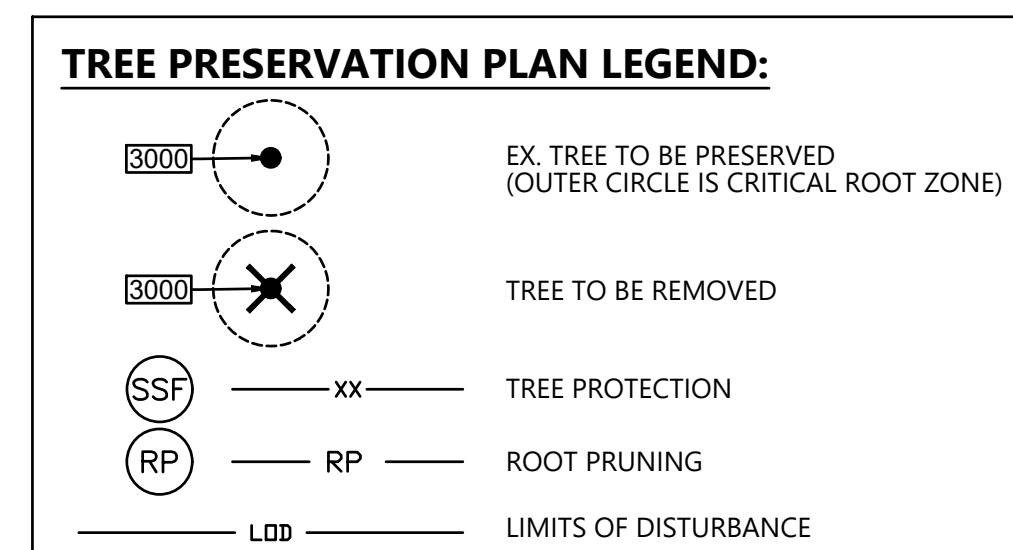
MATCH LINE STA. 185+00
SEE SHEET TP-31 FOR CONTINUATION

GRAPHIC SCALE



Tree #	Species	Size dbh	CRZ Critical Root Zone (radius ft)	SRZ Structural Rooting Zone (radius ft)	Condition %	Canopy Position	Crown Radius Avg. Radius (ft)	Crown Density %	Status	Activities							
										*Dead Tree	*Poor	*Assessment	*Off Site/Co-	*Tree	*Root Prune	*Monitor/Risk	*UFMD Review
3103	sweetgum	23	23	7.59	80	Codominant	25	60	PRESERVE	X							
3104	Norway maple	20	20	6.6	75	Codominant	20	70	PRESERVE	X							
3105	Callery pear	24	24	7.92	50	Isolated	20	60	PRESERVE	X	X						
3106	Callery pear	22	22	7.26	60	Isolated	15	70	PRESERVE	X	X						
3107	Callery pear	21	21	6.93	60	Isolated	20	60	PRESERVE	X	X						
3108	Callery pear	13	13	4.29	50	Isolated	15	70	PRESERVE	X							
3109	Callery pear	12	12	3.96	60	Isolated	10	60	PRESERVE	X							
3110	Callery pear	12	12	3.96	65	Isolated	15	70	PRESERVE	X							
3111	Callery pear	13	13	4.29	65	Isolated	15	70	PRESERVE	X							
3112	Callery pear	15	15	4.95	30	Isolated	5	20	PRESERVE	X	X						

SHEET TP-32 TREE SUMMARY:
TREES TO BE REMOVED = 0 THIS SHEET
TREES TO BE PLANTED = 0 THIS SHEET



NOTE: SUPER SILT FENCE IS PROVIDED AS TREE PROTECTION

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
DRAWN BY: A. NGUYEN
SHEET CHK'D BY: A. YEAGLE
CROSS CHK'D BY: C. HENEGAR
APPROVED BY: C. HENEGAR
DATE: AUGUST 2024

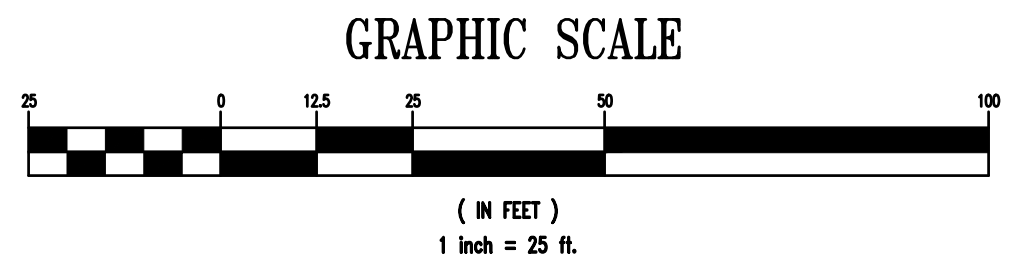
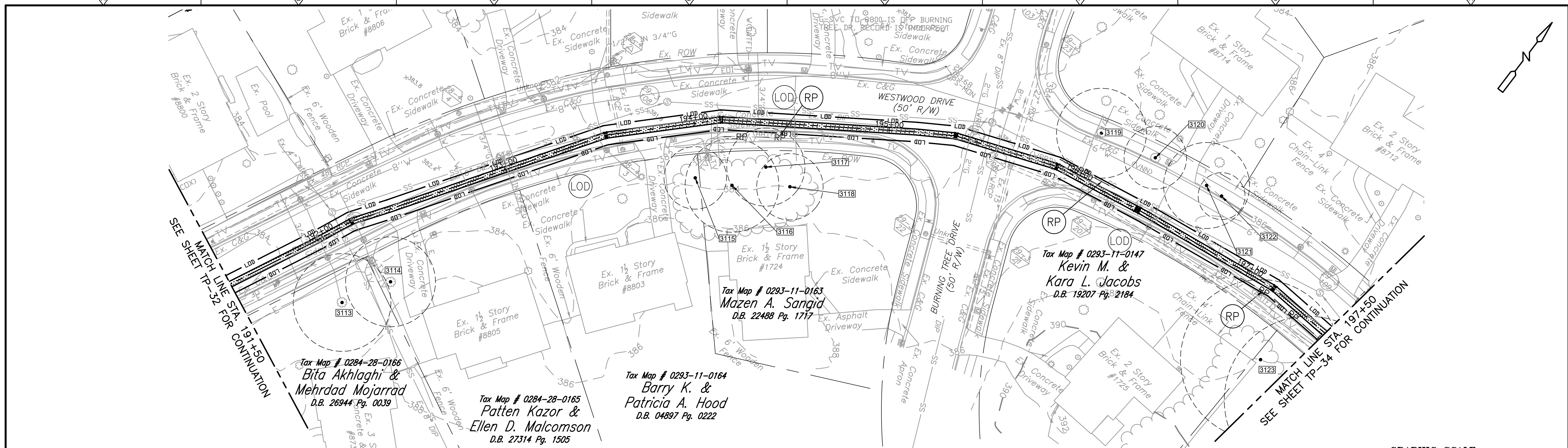
CDM Smith
10306 Eaton Place, Suite 500
Fairfax, VA 22030
Tel: (703) 691-6500

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RINKER DESIGN ASSOC.
11109 Endeavor Court
Suite 200
Manassas, VA 20109

FAIRFAX COUNTY, VIRGINIA
DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
TYSONS WASTEWATER CONVEYANCE SYSTEM
MODIFICATIONS
PACKAGE 4: FORCE MAIN

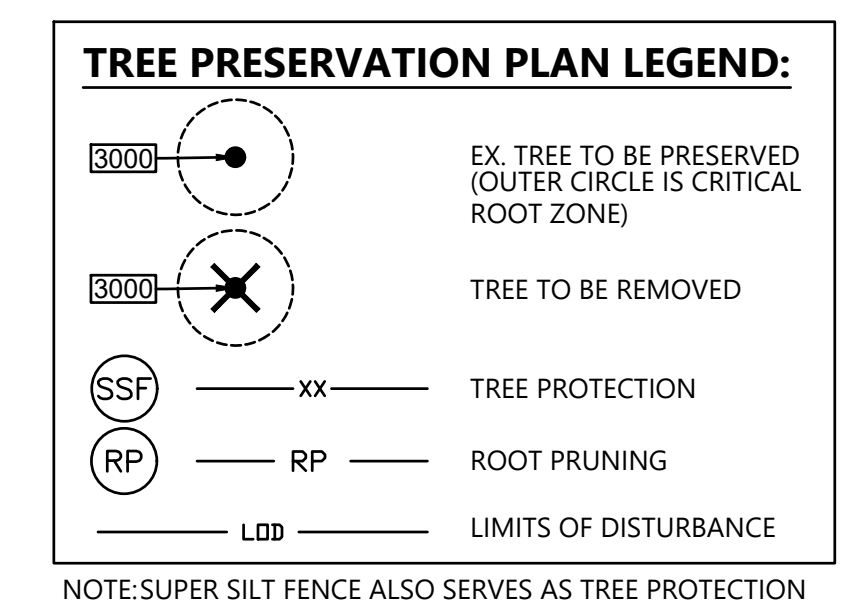
TREE PRESERVATION AND PLANTING PLAN
STA 185+00 TO STA 191+50

PROJECT NO. 5003-244105 FILE NAME 23-32 TREE PRES
SHEET NO. TP-32



Tree #	Species	Size dbh	CRZ Critical Root Zone (radius ft)	SRZ Structural Rooting Zone (radius ft)	Condition %	Canopy Position	Crown Radius Avg. Radius (ft)	Crown Density %	Status				Activities					
									*Dead Tree	*Poor	*Assessment	*Off Site/Co-	*Tree	*Root Prune	*Monitor/Risk	*UFMD Review	*Hand Removal	
3113	red maple	25	25	8.25	60	Codominant	20	40					PRESERVE	X				
3114	eastern white pine	23	23	7.59	70	Codominant	20	70					PRESERVE	X				
3115	eastern red cedar	14.8	16	5.28	75	Codominant	15	60					PRESERVE	X				
3116	red maple	24	24	7.92	75	Codominant	25	70					PRESERVE	X				
3117	red maple	15.13	20	6.6	70	Codominant	20	70					PRESERVE	X	X			
3118	red maple	17	17	5.61	70	Codominant	20	60					PRESERVE	X				
3119	red maple	23	23	7.59	75	Codominant	20	60					PRESERVE	X	X			
3120	red maple	16	16	5.28	75	Codominant	15	70					PRESERVE	X				
3121	American elm	22	22	7.26	75	Codominant	25	70					PRESERVE	X				
3122	red maple	12	12	3.96	75	Intermediate	15	60					PRESERVE	X				
3123	red maple	41	41	13.53	75	Codominant	35	80					PRESERVE	X	X			

SHEET TP-33 TREE SUMMARY:
 TREES TO BE REMOVED = 0 THIS SHEET
 TREES TO BE PLANTED = 0 THIS SHEET



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
 SHEET CHK'D BY: A. YEAGLE
 CROSS CHK'D BY: C. HENEGAR
 APPROVED BY: C. HENEGAR
 DATE: AUGUST 2024

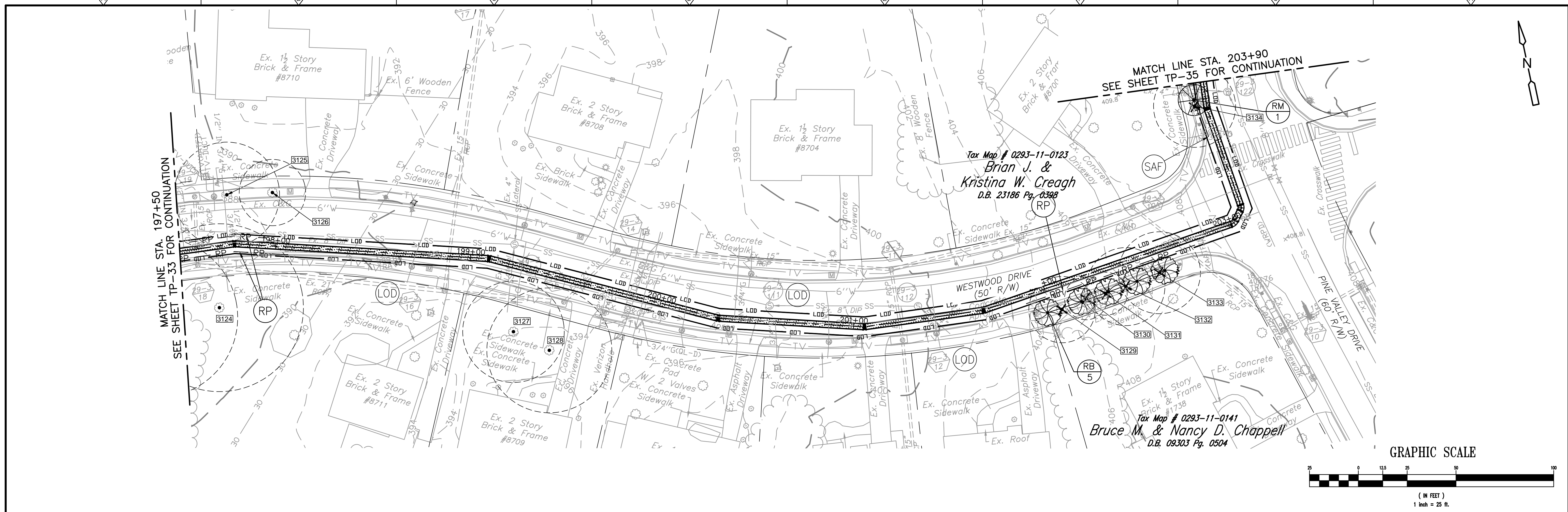
CDM Smith
 10306 Eaton Place, Suite 500
 Fairfax, VA 22030
 Tel: (703) 691-6500

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 RINKER DESIGN ASSOC.
 11100 Endeavor Court
 Suite 200
 Manassas, VA 20109

FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

TREE PRESERVATION AND PLANTING PLAN
 STA 191+50 TO STA 197+50

PROJECT NO. 5003-244105
FILE NAME: 33-39 TREE INV
SHEET NO. TP-33



Tree #	Species	Size	CRZ	SRZ	Condition	Canopy Position	Crown Radius	Crown Density	Status	Activities
		dbh	Critical Root Zone (radius ft)	Structural Rooting Zone (radius ft)	%		Avg. Radius (ft)	%		
3124	red maple	43	43	14.19	65	Codominant	25	40	PRESERVE	X X
3125	red maple	27	27	8.91	65	Codominant	25	80	PRESERVE	X X
3126	red maple	17	17	5.61	75	Codominant	15	50	PRESERVE	X
3127	red maple	26	26	8.58	65	Codominant	15	40	PRESERVE	X
3128	tulip tree	32	32	10.56	80	Intermediate	25	80	PRESERVE	X
3129	red maple	14.9	17	5.61	70	Codominant	20	70	REMOVE	X
3130	red maple	11	11	3.63	65	Codominant	15	60	REMOVE	X
3131	red maple	11	11	3.63	70	Codominant	15	30	REMOVE	X
3132	red maple	15,13	20	6.6	75	Codominant	20	70	REMOVE	X
3133	red maple	17,13	21	6.93	70	Codominant	20	50	REMOVE	X
3134	pin oak	21	21	6.93	70	Codominant	25	50	REMOVE	X

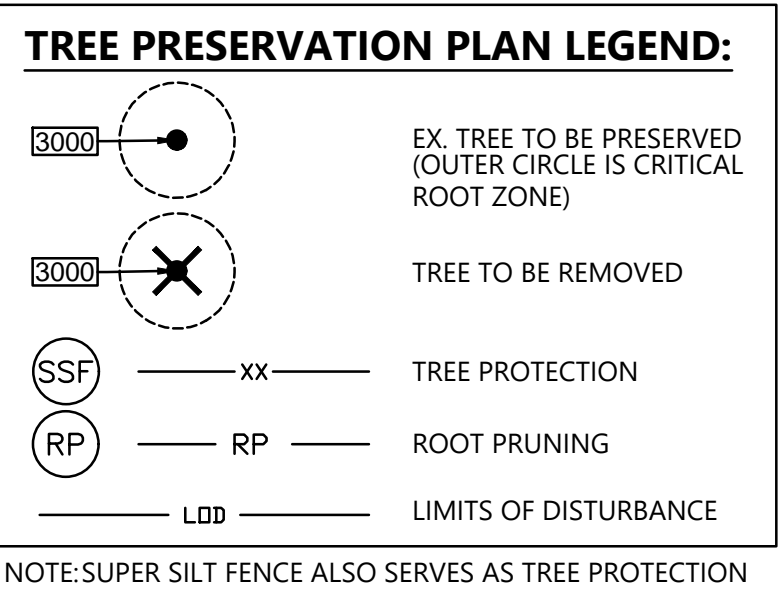
SYM.	ABBV.	QUAN.	COMMON NAME	BOTANICAL NAME	SIZE	ROOT
	RB	5	RIVER BIRCH	BETULA NIGRA	1" CAL.	B & B
	RM	1	RED MAPLE	ACER RUBRUM	1" CAL.	B & B

SEE SHEET TP-1 FOR FULL LIST OF PROPOSED PLANTINGS.

SHEET TP-34 TREE SUMMARY:

TREES TO BE REMOVED = 6 THIS SHEET
 TREES TO BE PLANTED = 6 THIS SHEET

NOTE: PROPOSED TREE PLANTING SHALL BE DIRECTED AND APPROVED BY FAIRFAX COUNTY.



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
 SHEET CHK'D BY: A. YEAGLE
 CROSS CHK'D BY: C. HENEGAR
 APPROVED BY: C. HENEGAR
 DATE: AUGUST 2024

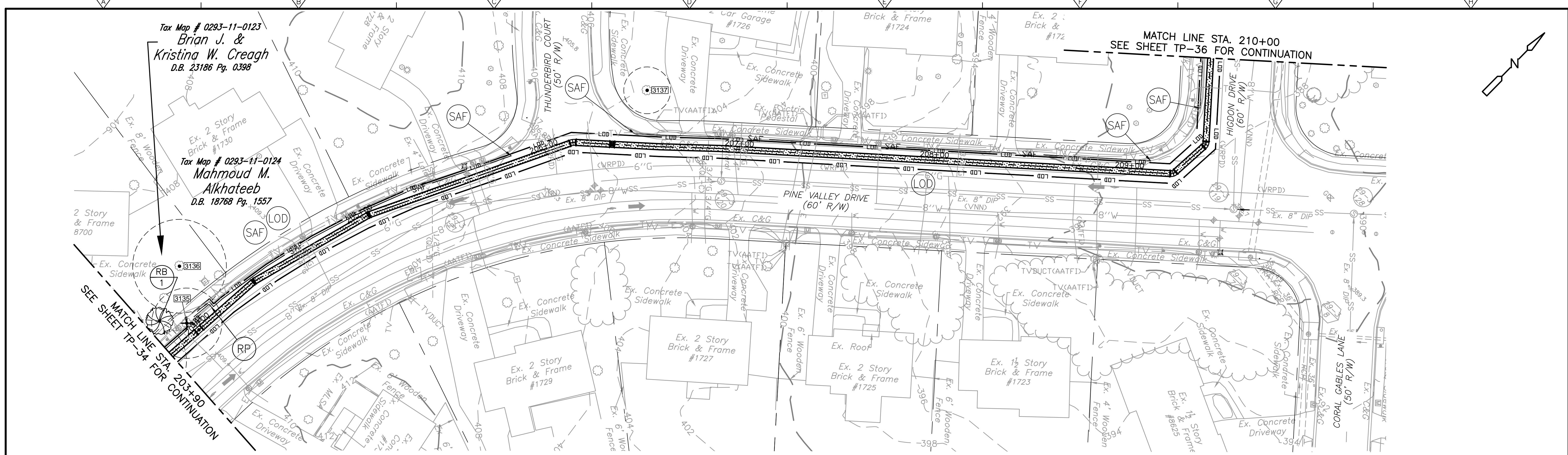
CDM Smith
 10306 Eaton Place, Suite 500
 Fairfax, VA 22030
 Tel: (703) 691-6500

rda
 RINKER DESIGN ASSOC.
 11100 Endeavor Court
 Suite 200
 Manassas, VA 20109

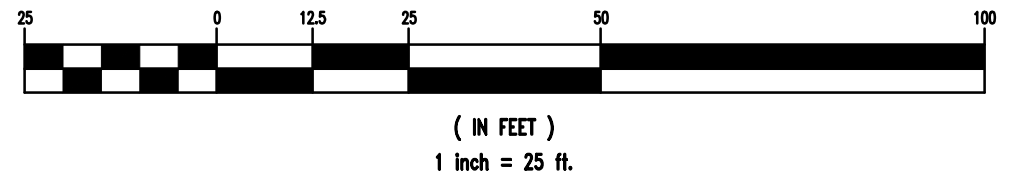
FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

TREE PRESERVATION AND PLANTING PLAN
 STA 197+50 TO STA 203+90

PROJECT NO. 5003-244105
FILE NAME: 33-39 TREE INV
SHEET NO. TP-34



GRAPHIC SCALE



Tree #	Species	Size	CRZ	SRZ	Condition	Canopy Position	Crown Radius	Crown Density				Status	Activities				
		dbh	Critical Root Zone (radius ft)	Structural Rooting Zone (radius ft)	%		Avg. Radius (ft)	%	* Dead Tree	* Poor	* Assessment	* Off Site/Co-	*Tree	*Root Prune	*Monitor/Risk	*UFMD Review	*Hand Removal
3135	red maple	18	18	5.94	70	Codominant	20	60					REMOVE				X
3136	red maple	24	24	7.92	85	Codominant	25	80					PRESERVE	X	X		
3137	Virginia pine	12	12	3.96	80	Codominant	15	80					PRESERVE	X			

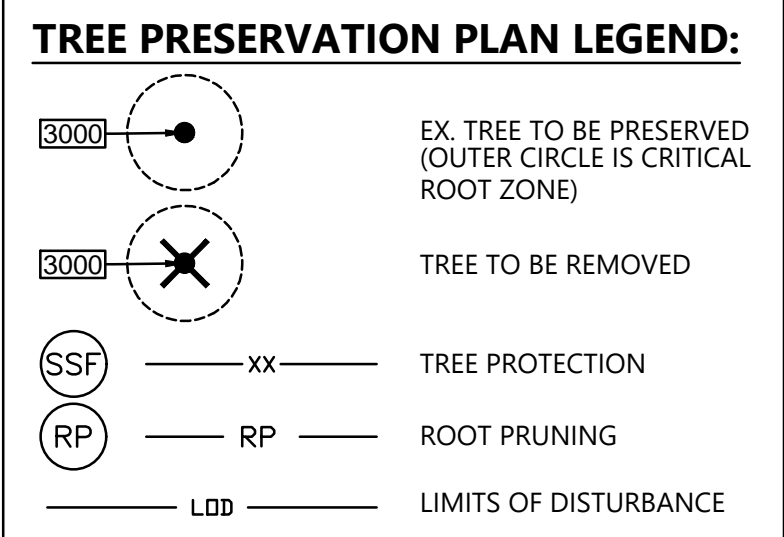
SYM.	ABBV.	QUAN.	COMMON NAME	BOTANICAL NAME	SIZE	ROOT
	RB	1	RIVER BIRCH	BETULA NIGRA	1" CAL.	B & B

SEE SHEET TP-1 FOR FULL LIST OF PROPOSED PLANTINGS.

SHEET TP-35 TREE SUMMARY:

TREES TO BE REMOVED = 1 THIS SHEET
 TREES TO BE PLANTED = 1 THIS SHEET

NOTE: PROPOSED TREE PLANTING SHALL BE DIRECTED AND APPROVED BY FAIRFAX COUNTY.



NOTE: SUPER SILT FENCE ALSO SERVES AS TREE PROTECTION

REV. NO.	DATE	DRWN	CHKD	REMARKS

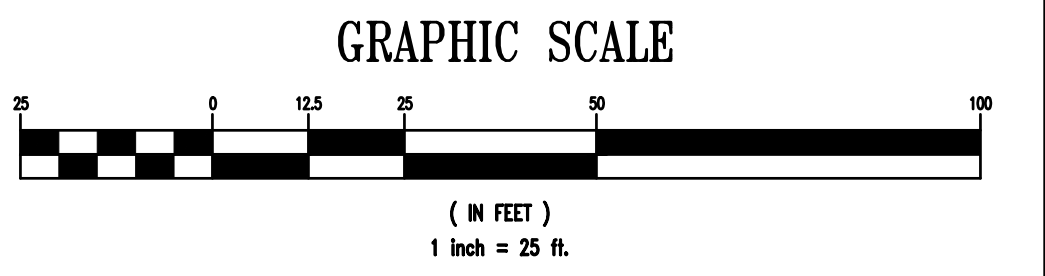
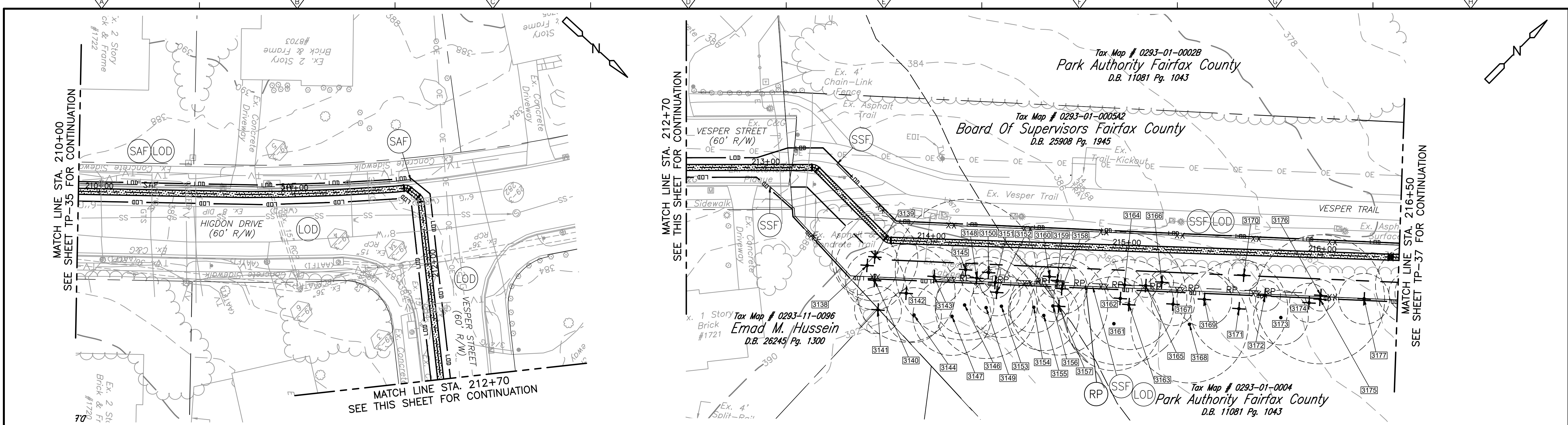
DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
 SHEET CHK'D BY: A. YEAGLE
 CROSS CHK'D BY: C. HENEGAR
 APPROVED BY: C. HENEGAR
 DATE: AUGUST 2024

11100 Endeavor Court
 Manassas, VA 20109

FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

TREE PRESERVATION AND PLANTING PLAN
 STA 203+90 TO STA 210+00

PROJECT NO. 5003-244105
FILE NAME: 33-39 TREE INV
SHEET NO. TP-35



Tree #	Species	Size dbh	CRZ Critical Root Zone (radius ft)	SRZ Structural Rooting Zone (radius ft)	Condition %	Canopy Position	Crown Radius Avg. Radius (ft)	Crown Density %	*Dead Tree *Poor *Assessment *Off Site/Co-	Status	Activities			
											*Tree	*Root Prune	*Monitor/Risk	*UFMD Review *Hand Removal
3138	red maple	16	16	5.28	75	Codominant	20	50		REMOVE				
3139	red maple	17,14	22	7.26	50	Codominant	15	30		REMOVE				
3140	red maple	15	15	4.95	75	Codominant	20	60		REMOVE				X
3141	tulip tree	12			65				X	REMOVE				X
3142	tulip tree	25	25	8.25	80	Codominant	25	60		REMOVE				X
3143	tulip tree	15	15	4.95	70	Intermediate	15	50		REMOVE				X
3144	tulip tree	14	14	4.62	70	Codominant	15	40		PRESERVE	X			
3145	tulip tree	32,6	36	11.88	75	Codominant	30	70		REMOVE				X
3146	tulip tree	15	15	4.95	70	Codominant	10	30		PRESERVE	X	X		
3147	tulip tree	20	20	6.6	75	Codominant	15	60		PRESERVE	X	X		
3148	red maple	8	8	2.64	75	Intermediate	10	60		REMOVE				X
3149	tulip tree	26	26	8.58	60	Codominant	20	40		PRESERVE	X	X		
3150	blackgum	6	6	1.98	75	Intermediate	5	30		REMOVE				X
3151	blackgum	8	8	2.64	65	Intermediate	10	40		REMOVE				X
3152	tulip tree	12	12	3.96	75	Codominant	15	30		REMOVE				X
3153	hickory	16	16	5.28	80	Codominant	15	30		PRESERVE	X	X		
3154	tulip tree	13	13	4.29	75	Codominant	15	30		PRESERVE	X	X		

Tree #	Species	Size dbh	CRZ Critical Root Zone (radius ft)	SRZ Structural Rooting Zone (radius ft)	Condition %	Canopy Position	Crown Radius Avg. Radius (ft)	Crown Density %	*Dead Tree *Poor *Assessment *Off Site/Co-	Status	Activities			
											*Tree	*Root Prune	*Monitor/Risk	*UFMD Review *Hand Removal
3155	tulip tree	18	18	5.94	70	Codominant	15	50		PRESERVE	X	X		
3156	tulip tree	8	8	2.64	70	Codominant	10	20		PRESERVE	X			
3157	tulip tree	25	25	8.25	75	Codominant	20	60		REMOVE				X
3158	tulip tree	13	13	4.29	75	Codominant	10	50		REMOVE				X
3159	sweet cherry	9	9	2.97	75	Intermediate	15	40		REMOVE				X
3160	American holly	6	6	1.98	80	Intermediate	5	60		REMOVE				X
3161	red maple	24	24	7.92	80	Codominant	25	70		PRESERVE	X	X		
3162	tulip tree	34	34	11.22	75	Codominant	30	60		REMOVE				X
3163	northern red oak	23	23	7.59	70	Codominant	20	40		REMOVE				X
3164	hornbeam	9	9	2.97	70	Intermediate	10	40		REMOVE				X
3165	American holly	6	6	1.98	70	Understory	5	70		REMOVE				X
3166	American holly	6	6	1.98	65	Understory	5	50		REMOVE				X
3167	blackgum	11	11	3.63	65	Intermediate	15	70		REMOVE				X
3168	tulip tree	30	30	9.9	75	Codominant	25	70		PRESERVE	X	X		
3169	blackgum	14	14	4.62	75	Codominant	15	30		REMOVE				X
3170	American holly	8	8	2.64	75	Intermediate	10	80		REMOVE				X
3171	black oak	25	25	8.25	70	Codominant	20	30		REMOVE				X
3172	American holly	8	8	2.64	75	Intermediate	10	60		REMOVE				X
3173	red maple	14	14	4.62	75	Codominant	15	50		PRESERVE	X	X		
3174	blackgum	10	10	3.3	60	Intermediate	5	20		REMOVE				X
3175	northern red oak	33	33	10.89	75	Codominant	35	80		REMOVE				X
3176	American holly	8	8	2.64	80	Understory	10	60		REMOVE				X
3177	red maple	13	13	4.29	75	Codominant	15	50		REMOVE				X

SHEET TP-36 TREE SUMMARY:
 TREES TO BE REMOVED = 29 THIS SHEET
 TREES TO BE PLANTED = 29 THIS SHEET

NOTE: PROPOSED TREE PLANTING SHALL BE DIRECTED AND APPROVED BY FAIRFAX COUNTY.

TREE PRESERVATION PLAN LEGEND:

- 3000 (circle with dot) EX. TREE TO BE PRESERVED (OUTER CIRCLE IS CRITICAL ROOT ZONE)
- 3000 (circle with X) TREE TO BE REMOVED
- SSF (dashed line) TREE PROTECTION
- RP (solid line) ROOT PRUNING
- LDD (dotted line) LIMITS OF DISTURBANCE

NOTE: SUPER SILT FENCE ALSO SERVES AS TREE PROTECTION

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
 SHEET CHK'D BY: A. YEAGLE
 CROSS CHK'D BY: C. HENEGAR
 APPROVED BY: C. HENEGAR
 DATE: AUGUST 2024

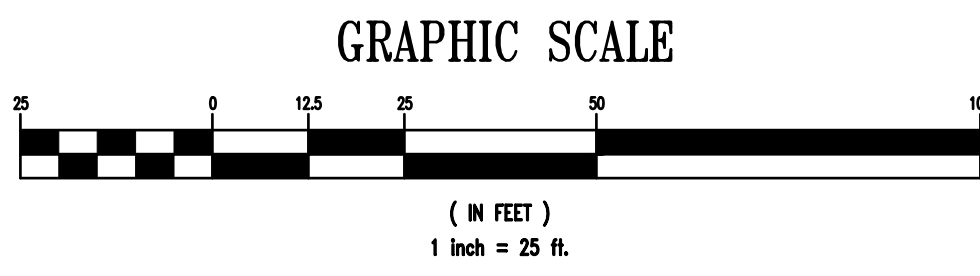
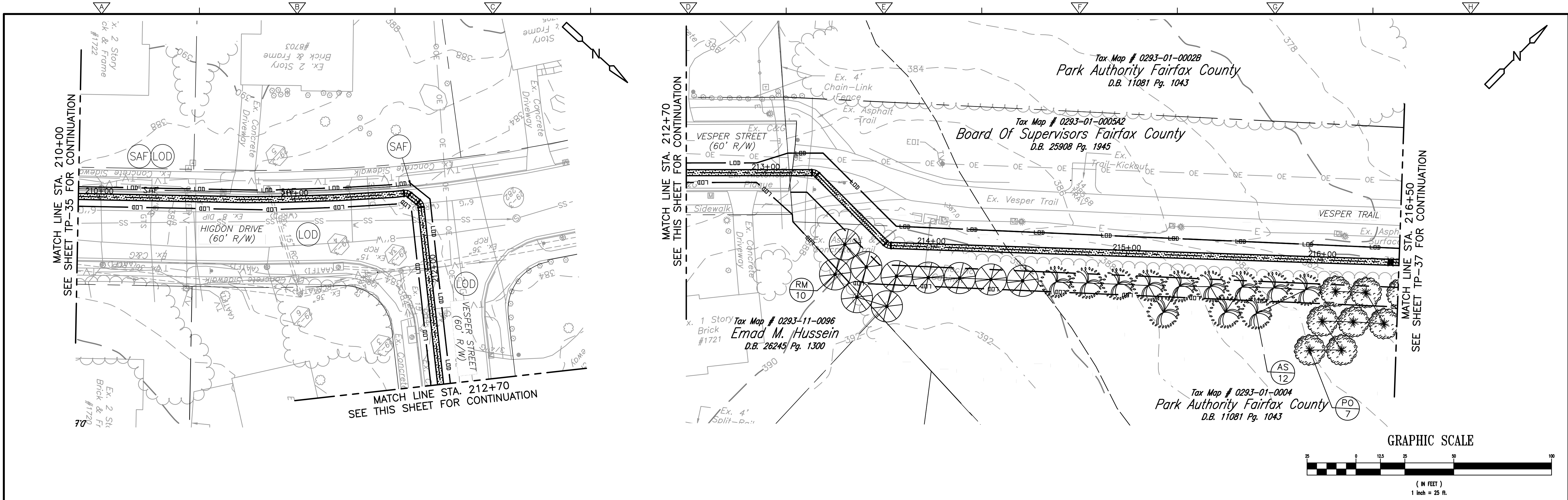
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 10306 Eaton Place, Suite 500
 Fairfax, VA 22030
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 RINKER DESIGN ASSOC.
 11100 Endeavor Court
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 Manassas, VA 20109

FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

TREE PRESERVATION PLAN
 STA 210+00 TO STA 216+50

PROJECT NO. 5003-244105
 FILE NAME: 33-39 TREE INV
 SHEET NO.
 TP-36



PROPOSED PLANT LIST						
SYM.	ABBY.	QUAN.	COMMON NAME	BOTANICAL NAME	SIZE	ROOT
	AS	12	AMERICAN SYCAMORE	PLATANUS OCCIDENTALIS	1" CAL.	B & B
	PO	7	PIN OAK	QUERCUS PALUSTRIS	1" CAL.	B & B
	RM	10	RED MAPLE	ACER RUBRUM	1" CAL.	B & B

SEE SHEET TP-1 FOR FULL LIST OF PROPOSED PLANTINGS.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
 SHEET CHK'D BY: A. YEAGLE
 CROSS CHK'D BY: C. HENEGAR
 APPROVED BY: C. HENEGAR
 DATE: AUGUST 2024

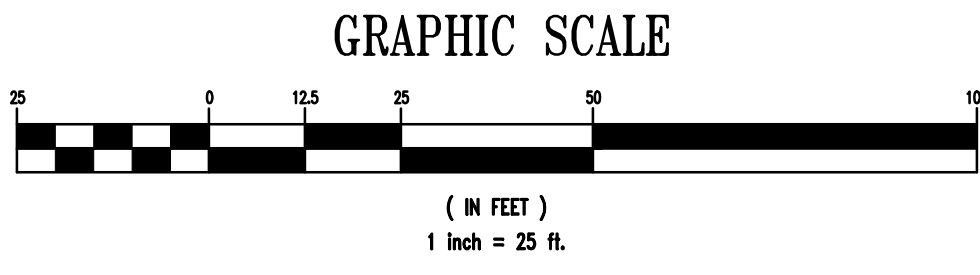
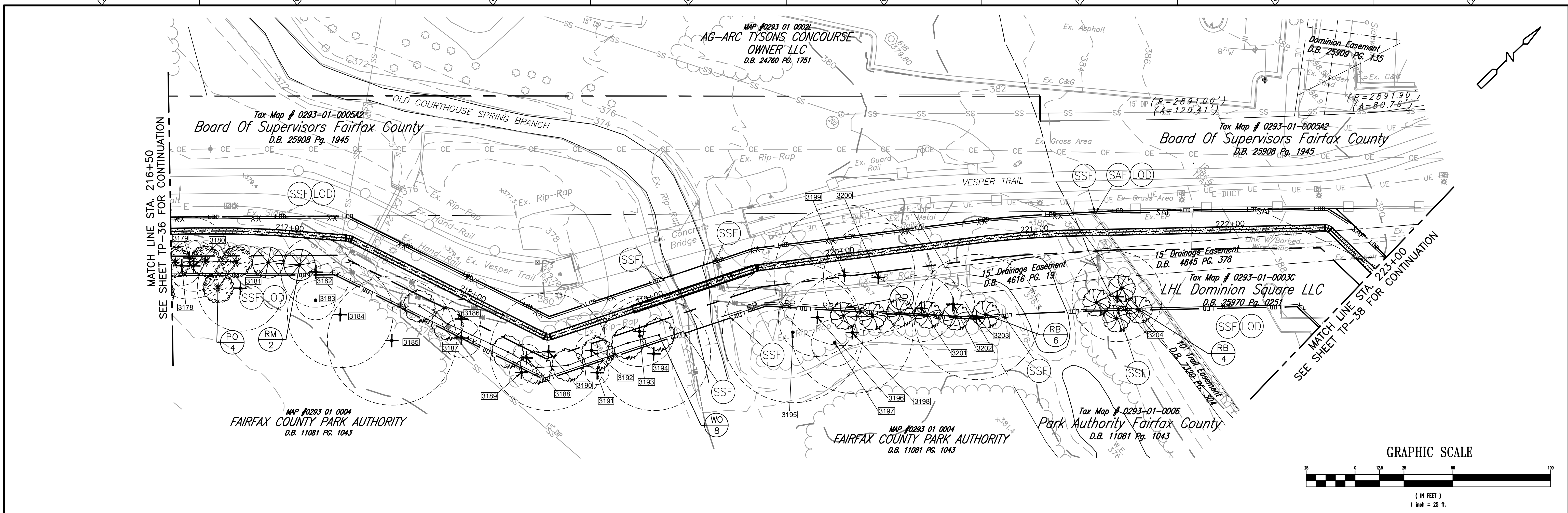
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 10306 Eaton Place, Suite 500
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 Tel: (703) 691-6500

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FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

PLANTING PLAN
 STA 210+00 TO STA 216+50

PROJECT NO. 5003-244105
 FILE NAME: 33-39 TREE INV
 SHEET NO.
 TP-36A



Tree #	Species	Size dbh	CRZ Critical Root Zone (radius ft)	SRZ Structural Rooting Zone (radius ft)	Condition %	Canopy Position	Crown Radius Avg. Radius (ft)	Crown Density %	*Dead Tree	*Poor	*Assessment	*Off Site/Co-	Status	Activities			
														*Tree	*Root Prune	*Monitor/Risk	*UFMD Review
3178	blackgum	10	10	3.3	65	Intermediate	10	30					REMOVE				X
3179	tulip tree	21	21	6.93	55	Codominant	15	30					REMOVE				X
3180	American holly	13	13	4.29	75	Understory	10	70					REMOVE				X
3181	red maple	22	22	7.26	80	Codominant	20	70					REMOVE				X
3182	red maple	18	18	5.94	75	Codominant	20	40					REMOVE				X
3183	northern red oak	10	10	3.3	75	Codominant	15	60					PRESERVE	X			
3184	red maple	27	27	8.91	75	Codominant	25	70					REMOVE				X
3185	northern red oak	33	33	10.89	75	Codominant	25	70					REMOVE				X
3186	red maple	10	10	3.3	65	Intermediate	10	60					REMOVE				X
3187	tulip tree	10	10	3.3	45	Intermediate	5	10		X			REMOVE				X
3188	hornbeam	7	7	2.31	75	Intermediate	10	80					REMOVE				X
3189	hornbeam	6	6	1.98	65	Intermediate	10	70					REMOVE				X
3190	red maple	30	30	9.9	70	Codominant	30	80					REMOVE				X
3191	American holly	6	6	1.98	85	Understory	5	80					REMOVE				X
3192	hickory	8	8	2.64	80	Codominant	10	70					REMOVE				X
3193	red maple	18	18	5.94	70	Codominant	20	70					REMOVE				X
3194	red maple	29	29	9.57	60	Codominant	20	60					REMOVE				X
3195	tulip tree	28.22	36	11.88	60	Codominant	20	60					PRESERVE	X	X		
3196	tulip tree	20	20	0	0					X			REMOVE				X
3197	red maple	12	12	3.96	75	Codominant	15	60					PRESERVE	X			
3198	pin oak	31	31	10.23	55	Codominant	20	50					REMOVE				X
3199	red maple	36	36	11.88	70	Codominant	25	70					REMOVE				X
3200	tulip tree	28	28	9.24	75	Codominant	25	60					REMOVE				X
3201	red maple	15.8	17	5.61	65	Intermediate	20	70					REMOVE				X
3202	eastern white pine	11	11	3.63	75	Intermediate	15	70					REMOVE				X
3203	green ash	32	32	10.56	60	Codominant	30	70					REMOVE				X
3204	pin oak	23	23	7.59	70	Intermediate	25	80					REMOVE				X

SYM.	ABBV.	QUAN.	COMMON NAME	BOTANICAL NAME	SIZE	ROOT
	RB	10	RIVER BIRCH	BETULA NIGRA	1" CAL.	B & B
	PO	4	PIN OAK	QUERCUS PALUSTRIS	1" CAL.	B & B
	WO	8	WILLOW OAK	QUERCUS PHELLOS	1" CAL.	B & B
	RM	2	RED MAPLE	ACER RUBRUM	1" CAL.	B & B

SEE SHEET TP-1 FOR FULL LIST OF PROPOSED PLANTINGS.

SHEET TP-37 TREE SUMMARY:

TREES TO BE REMOVED = 24 THIS SHEET
 TREES TO BE PLANTED = 24 THIS SHEET

NOTE: PROPOSED TREE PLANTING SHALL BE DIRECTED AND APPROVED BY FAIRFAX COUNTY.

TREE PRESERVATION PLAN LEGEND:

- EX. TREE TO BE PRESERVED (OUTER CIRCLE IS CRITICAL ROOT ZONE)
- TREE TO BE REMOVED
- TREE PROTECTION
- ROOT PRUNING
- LIMITS OF DISTURBANCE

NOTE: SUPER SILT FENCE ALSO SERVES AS TREE PROTECTION

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
 SHEET CHK'D BY: A. YEAGLE
 CROSS CHK'D BY: C. HENEGAR
 APPROVED BY: C. HENEGAR
 DATE: AUGUST 2024

CDM Smith
 10306 Eaton Place, Suite 500
 Fairfax, VA 22030
 Tel: (703) 691-6500

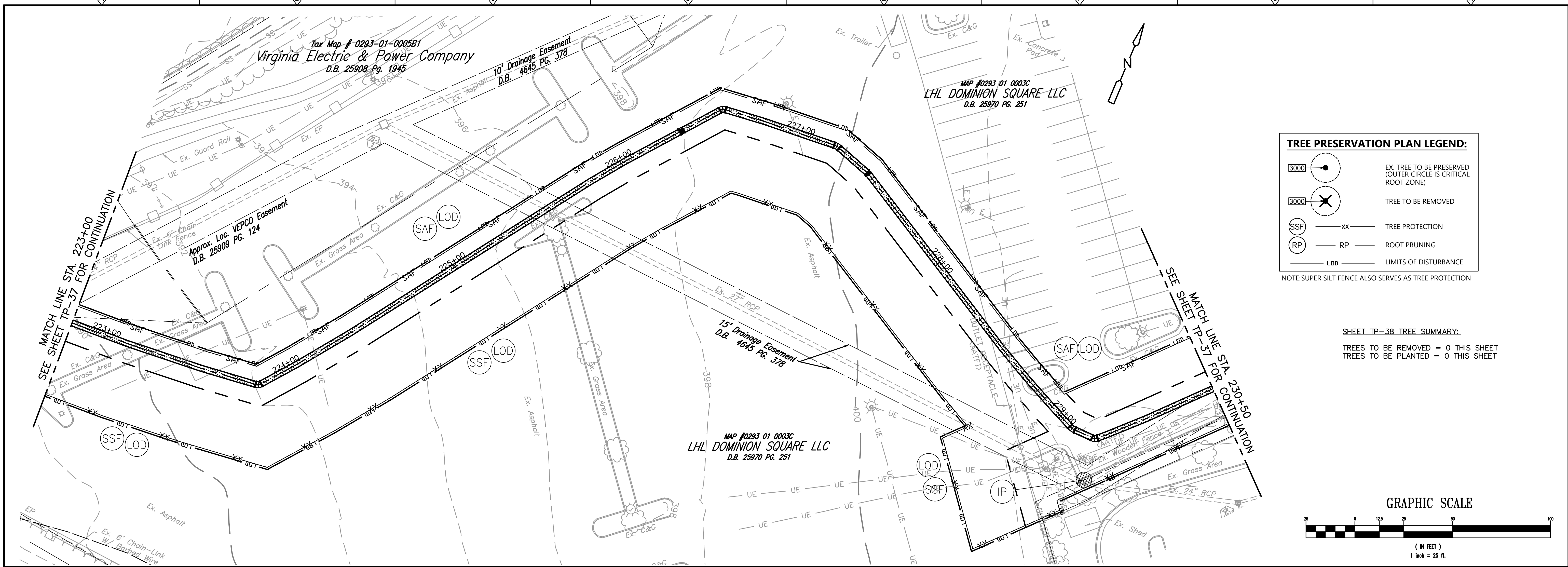
rd
 RINKER DESIGN ASSOC.
 11102 Endeavor Court
 Suite 200
 Manassas, VA 20109

FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

PROJECT NO. 5003-244105
 FILE NAME: 33-39 TREE INV
 SHEET NO. TP-37

TREE PRESERVATION AND PLANTING PLAN
 STA 216+50 TO STA 223+00

70% DESIGN SUBMITTAL - NOT FOR CONSTRUCTION



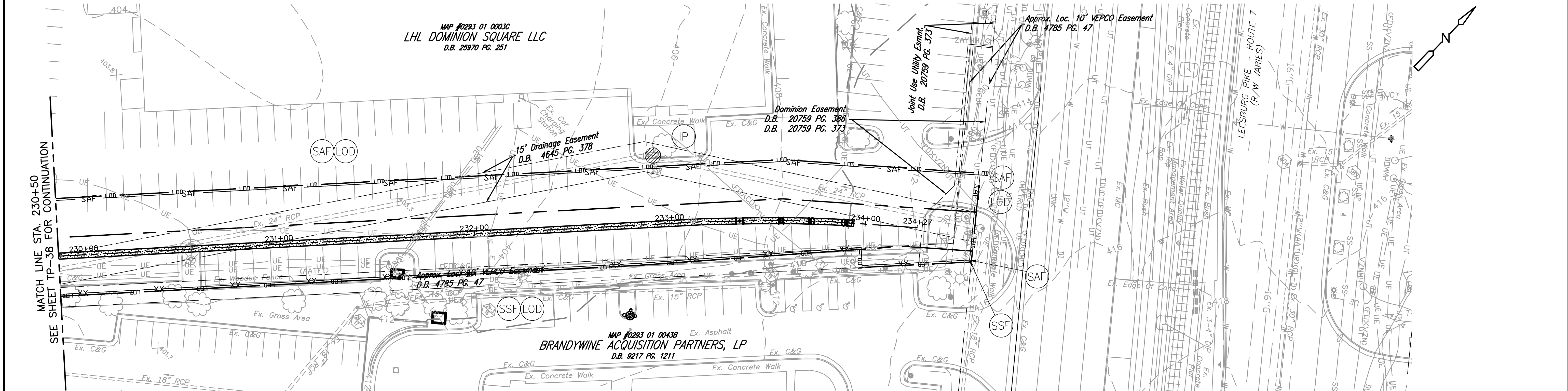
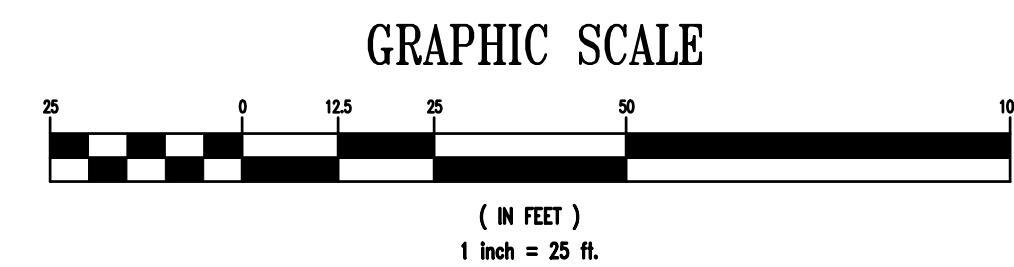
TREE PRESERVATION PLAN LEGEND:

- EX. TREE TO BE PRESERVED (OUTER CIRCLE IS CRITICAL ROOT ZONE)
- TREE TO BE REMOVED
- TREE PROTECTION
- ROOT PRUNING
- LIMITS OF DISTURBANCE

NOTE: SUPER SILT FENCE ALSO SERVES AS TREE PROTECTION

SHEET TP-38 TREE SUMMARY:

TREES TO BE REMOVED = 0 THIS SHEET
 TREES TO BE PLANTED = 0 THIS SHEET



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
 DRAWN BY: A. NGUYEN
 SHEET CHK'D BY: A. YEAGLE
 CROSS CHK'D BY: C. HENEGAR
 APPROVED BY: C. HENEGAR
 DATE: AUGUST 2024

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 10306 Eaton Place, Suite 500
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 RINKER DESIGN ASSOC.
 11109 Endeavor Court
 Suite 200
 Manassas, VA 20109

FAIRFAX COUNTY, VIRGINIA
 DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
 TYSONS WASTEWATER CONVEYANCE SYSTEM
 MODIFICATIONS
 PACKAGE 4: FORCE MAIN

TREE PRESERVATION AND PLANTING PLAN
 STA 223+00 TO STA 230+50

PROJECT NO. 5003-244105
FILE NAME: 33-38 TREE PRES
SHEET NO. TP-38

Tree #	Species	Size	CRZ	SRZ	Condition	Canopy Position	Crown Radius	Crown Density	*Dead Tree	*Poor	*Assessment	*Off Site/Co-	Status	Activities			CRZ impacts (critical root zone)	Notes
														*Tree	*Root Prune	*Monitor/Risk		
		dbh	Critical Root Zone (radius ft)	Structural Rooting Zone (radius ft)	%		Avg. Radius (ft)	%										
2301	eastern white pine	25	25	8.25	75	Codominant	20	60					PRESERVE	X			No impact	
2302	common crapemyrtle	9,9,9,6,5,5,5	19	6.27	80	Isolated	15	80					PRESERVE	X			No impact	
2303	Norway maple	12,9	15	4.95	80	Isolated	15	80					PRESERVE	X			No impact	
2304	white mulberry	13	13	4.29	65	Codominant	20	70					PRESERVE	X			No impact	
2305	maple species	26	26	8.58	75	Codominant	25	80					PRESERVE	X	X		6%	
2306	white mulberry	11,7	13	4.29	60	Isolated	15	60					PRESERVE	X			9%	
2307	white mulberry	10,7	12	3.96	65	Codominant	15	70					PRESERVE	X			40%	Removal recommended due to high impact.
2308	flowering cherry	15	15	4.95	75	Codominant	20	70					PRESERVE	X			25%	
2309	sassafras	12	12	3.96	70	Codominant	10	50					PRESERVE	X			No impact	
2310	magnolia	12,9,8,8	19	6.27	80	Isolated	20	80					PRESERVE	X			No impact	
2311	red maple	36	36	11.88	70	Codominant	30	80					PRESERVE	X			40%	Removal recommended due to high impact.
2312	flowering cherry	20	20	6.6	75	Codominant	20	70					PRESERVE	X			No impact	
2313	red maple	19	19	6.27	75	Codominant	20	70					PRESERVE	X			29%	
2314	tulip tree	26	26	8.58	85	Codominant	30	80					PRESERVE	X			41%	
2315	white mulberry	13,9	16	5.28	75	Isolated	20	70					PRESERVE	X			16%	
2316	Norway maple	21	21	6.93	75	Codominant	20	70					PRESERVE	X			24%	
2317	Norway spruce	21	21	6.93	80	Codominant	15	70					PRESERVE	X			24%	
2318	red maple	22	22	7.26	80	Codominant	25	80					PRESERVE	X			17%	
2319	Norway spruce	14	14	4.62	80	Codominant	15	80					PRESERVE	X			30%	
2320	flowering cherry	12	12	3.96	75	Isolated	20	80					PRESERVE	X			16%	
2321	red maple	25	25	8.25	80	Isolated	30	80					PRESERVE	X			5%	
2322	red maple	14	14	4.62	70	Codominant	15	80					PRESERVE	X			No impact	
2323	red maple	21	21	6.93	60	Codominant	20	60					PRESERVE	X			10%	Decline. Sheet pruned, supplemental support system installed.
2324	Norway maple	15,15	21	6.93	80	Codominant	20	80					PRESERVE	X			7%	
2325	arbutus	12	12	3.96	75	Cluster	10	70					PRESERVE	X			20%	
2326	arbutus	13	13	4.29	80	Cluster	15	80					PRESERVE	X			No impact	
2327	red maple	34	34	11.22	75	Codominant	30	70					PRESERVE	X	X		5%	
2328	red maple	23	23	7.59	80	Codominant	25	80					PRESERVE	X			23%	
2329	red maple	23,16	28	9.24	75	Codominant	25	80					PRESERVE	X			9%	
2330	red maple	26	26	8.58	75	Codominant	30	80					PRESERVE	X			9%	
2331	red maple	34	34	11.22	75	Codominant	30	80					PRESERVE	X			20%	
2332	flowering cherry	24	24	7.92	60	Intermediate	15	60					PRESERVE	X			100%	Removal recommended due to high impact.
2333	sweetgum	20	20	6.6	75	Codominant	20	80					PRESERVE	X			36%	Sidewalk lifting.
2334	red maple	17	17	5.61	75	Isolated	20	80					PRESERVE	X			10%	
2335	red maple	20,18,12	29	9.57	75	Codominant	25	70					REMOVE		X		41%	Removal recommended due to high impact.
2336	eastern white pine	27	27	8.91	75	Codominant	20	80					REMOVE		X		100%	Removal recommended due to high impact.
2337	black walnut	28	28	9.24	80	Codominant	35	80					REMOVE		X		40%	Removal recommended due to high impact.
2338	American holly	13	13	4.29	80	Intermediate	10	80					REMOVE		X		15%	
2339	American holly	12	12	3.96	75	Intermediate	10	70					PRESERVE	X	X		20%	
2340	American holly	12	12	3.96	75	Intermediate	10	60					PRESERVE	X			No impact	
2341	tulip tree	20	20	6.6	70	Codominant	20	30					PRESERVE	X	X		100%	Removal recommended due to high impact.
2342	tulip tree	24	24	7.92	70	Intermediate	25	60					PRESERVE	X			42%	Removal recommended due to high impact.
2343	tulip tree	14	14	4.62	75	Codominant	15	70					PRESERVE	X			27%	
2344	tulip tree	21	21	6.93	60	Codominant	15	30					PRESERVE	X			13%	Decline.
2345	tulip tree	21	21	6.93	65	Codominant	15	70					PRESERVE	X			9%	
2346	red maple	27	27	8.91	70	Codominant	20	40					REMOVE				100%	Removal recommended due to high impact.
2347	black locust	16	16	5.28	65	Codominant	15	30					PRESERVE	X			No impact	Decline.
2348	tulip tree	8	8	2.64	80	Intermediate	10	80					REMOVE				100%	Removal recommended due to high impact.
2349	tulip tree	20	20	6.6	75	Codominant	20	60					REMOVE				100%	Removal recommended due to high impact.
2350	red maple	15			0				X				REMOVE				N/A	Dead tree.
2351	red maple	16	16	5.28	40	Codominant	15	20		X			REMOVE				34%	Removal recommended due to high impact and poor condition.
2352	red maple	15	15	4.95	75	Codominant	20	60					PRESERVE	X			4%	
2353	tulip tree	26	26	8.58	75		20	40					REMOVE		X		100%	Removal recommended due to high impact.
2354	tulip tree	15	15	4.95	70	Codominant	15	30					REMOVE				10%	
2355	tulip tree	30	30	9.9	75	Codominant	25	60					REMOVE				21%	
2356	tulip tree	24	24	7.92	75	Codominant	20	60					REMOVE				17%	
2357	tulip tree	23	23	7.59	80	Codominant	25	60					REMOVE				100%	Removal recommended due to high impact.
2358	tulip tree	21	21	6.93	75	Codominant	20	60					REMOVE		X		41%	Removal recommended due to high impact.
2359	tulip tree	27	27	8.91	80	Codominant	25	70					REMOVE				5%	
2360	tulip tree	23	23	7.59	75	Codominant	20	50					REMOVE				35%	
2361	American beech	12	12	3.96	80	Intermediate	15	70					REMOVE				100%	Removal recommended due to high impact.
2362	tulip tree	24	24	7.92	75	Codominant	20	60					REMOVE				9%	
2363	tulip tree	10	10	3.3	75	Codominant	15	70					PRESERVE	X			100%	Removal recommended due to high impact.
2364	tulip tree	14	14	4.62	75	Codominant	20	70					REMOVE				No impact	
2365	tulip tree	19	19	6.27	70	Codominant	20	60					REMOVE				No impact	On creek bank, poor anchorage.
2366	white oak	28	28	9.24	80	Codominant	35	70					PRESERVE	X			12%	
2367	red maple	14	14	4.62	75	Codominant	15	70					REMOVE				100%	Removal recommended due to high impact.
2368	black oak	12			0					X			REMOVE				N/A	Dead tree.
2369	red maple	14	14	4.62	65	Codominant	15	50					PRESERVE	X			No impact	Trunk decay.
2370	northern red oak	21	21	6.93	70	Codominant	25	70					PRESERVE	X	X		100%	Removal recommended due to high impact. Leans toward construction area.
2371	red maple	12	12	3.96	75	Codominant	15	70					PRESERVE	X			No impact	
2372	blackgum	6	6	1.98	50	Intermediate	5	30					PRESERVE	X			25%	Removal recommended due to high impact and poor condition.
2373	blackgum	12	12	3.96	70	Codominant	15	50					PRESERVE	X			24%	
2374	white oak	8	8	2.64	70	Codominant	10	60					REMOVE				100%	Removal recommended due to high impact.
2375	sweet cherry	6	6	1.98	70	Codominant	10	60					PRESERVE	X			100%	Removal recommended due to high impact.
2376	tulip tree	23	23	7.59	80	Codominant	25	60					REMOVE				100%	Removal recommended due to high impact.
2377	red maple	20	20	6.6	75	Codominant	20	80					PRESERVE	X			No impact	
2378	white oak	22	22	7.26	70	Codominant	30	70					REMOVE				27%	
2379	red maple	15	15	4.95	80	Codominant	20	60					REMOVE				100%	Removal recommended due to high impact.
2380	red maple	8	8	2.64	65	Codominant	15	20					REMOVE				13%	
2381	tulip tree	15	15	4.95	75	Codominant	20	50					REMOVE				25%	
2382	tulip tree	10	10	3.3	70	Codominant	15	20					REMOVE				100%	Removal recommended due to high impact.

Tree #	Species	Size	CRZ	SRZ	Condition	Canopy Position	Crown Radius	Crown Density	*Dead Tree	*Poor	*Assessment	*Off Site/Co-	Status	Activities			CRZ impacts (critical root zone)	Notes
														*Tree	*Root Prune	*Monitor/Risk		
		dbh	Critical Root Zone (radius ft)	Structural Rooting Zone (radius ft)	%		Avg. Radius (ft)	%										
2383	tulip tree	21	21	6.93	70	Codominant	25	70					REMOVE				100%	Removal recommended due to high impact.
2384	tulip tree	16	16	5.28	70	Codominant	20	50					REMOVE				100%	Removal recommended due to high impact.
2385	red maple	12	12	3.96	75	Intermediate	15	50					REMOVE				5%	
2386	white oak	21	21	6.93	60	Codominant	20	30					REMOVE		X	X	32%	Internal trunk decay detected through sounding, extent not determined. Long term monitoring recommended. Review during pre-construction.
2387	white oak	12	12	3.96	65	Intermediate	15	40					REMOVE			X	100%	Removal recommended due to high impact.
2388	red maple	8	8	2.64	75	Intermediate	15	60					REMOVE				7%	
2389	tree of heaven	18	18	5.94	70	Codominant	20	60					REMOVE			X	43%	Removal recommended due to high impact. Invasive species.
2390	tulip tree	18	18	5.94	70	Codominant	20	70					PRESERVE				No impact	Moderate trunk wound.
2391	red maple	11	11	3.63	50	Codominant	10	20					REMOVE				No impact	Broken main leader.
2392	red maple	8	8	2.64	60	Codominant	10	40					REMOVE				No impact	
2393	red maple	10	10	3.3	75	Codominant	15	60					REMOVE				No impact	
2394	red maple	12	12	3.96	70	Codominant	15	50					REMOVE		X		40%	Removal recommended due to high impact.
2395</																		

TREE INVENTORY NOTE: TREE LABEL 2502 - 2700 ARE NOT USED.

Tree #	Species	Size	CRZ	SRZ	Condition	Canopy Position	Crown Radius	Crown Density	*Dead Tree	*Poor	*Assessment	*Off Site/Co-	Status	Activities				CRZ impacts (critical root zone)	Notes
														*Tree	*Root Prune	*Monitor/Risk	*UFMD Review		
2465	red maple	18,13	22	7.26	75	Codominant	30	70					PRESERVE	X	X			5%	
2466	red maple	22,18,18	24	7.92	75	Codominant	30	70					PRESERVE	X	X			6%	
2467	red maple	28	28	9.24	75	Codominant	30	70					PRESERVE	X	X			11%	
2468	red maple	18,16,16,14	32	10.56	75	Codominant	30	60					PRESERVE	X	X			15%	
2469	red maple	32	32	10.56	75	Codominant	30	80					PRESERVE	X	X			21%	
2470	pin oak	18	18	5.94	75	Codominant	20	70					PRESERVE	X				No impact	
2471	red maple	18	18	5.94	75	Codominant	20	60					PRESERVE	X				No impact	
2472	red maple	23	23	7.59	70	Codominant	30	80					PRESERVE	X	X			6%	
2473	red maple	18	18	5.94	70	Codominant	15	40					PRESERVE	X				No impact	
2474	red maple	15	15	4.95	70	Codominant	15	70					PRESERVE	X				No impact	
2475	red maple	34	34	11.22	65	Codominant	35	80					PRESERVE	X	X			14%	
2476	red maple	18	18	5.94	70	Codominant	25	60					PRESERVE	X				No impact	
2477	pin oak	39	39	12.87	80	Codominant	40	80					PRESERVE	X	X			13%	
2478	red maple	15	15	4.95	75	Codominant	20	70					PRESERVE	X				No impact	
2479	red maple	16	16	5.28	60	Codominant	15	80					PRESERVE	X				No impact	Trunk decay cavity.
2480	red maple	15	15	4.95	70	Codominant	15	40					PRESERVE	X				No impact	
2481	red maple	12	12	3.96	80	Codominant	15	60					PRESERVE	X				No impact	
2482	red maple	17	17	5.61	70	Codominant	20	60					PRESERVE	X				No impact	
2483	red maple	16	16	5.28	75	Codominant	25	60					PRESERVE	X				No impact	
2484	red maple	15	15	4.95	75	Codominant	20	70					PRESERVE	X				No impact	
2485	red maple	25	25	8.25	75	Codominant	25	80					PRESERVE	X	X			6%	
2486	red maple	15	15	4.95	80	Codominant	20	60					PRESERVE	X				No impact	
2487	red maple	22	22	7.26	80	Codominant	25	80					PRESERVE	X	X			3%	
2488	red maple	27	27	8.91	70	Codominant	30	80					PRESERVE	X	X			8%	
2489	eastern white pine	25	25	8.25	80	Codominant	20	80					PRESERVE	X				No impact	
2490	red maple	18	18	5.94	75	Codominant	25	60					PRESERVE	X				No impact	
2491	red maple	15	15	4.95	75	Codominant	20	40					PRESERVE	X				No impact	
2492	eastern white pine	12	12	3.96	80	Codominant	15	80					PRESERVE	X				No impact	
2493	American holly	15	15	4.95	80	Codominant	15	90					PRESERVE	X				No impact	
2494	eastern red cedar	16	16	5.28	80	Codominant	15	80					PRESERVE	X				No impact	
2495	tulip tree	27	27	8.91	80	Codominant	35	70					PRESERVE	X				2%	
2496	black oak	12	12	3.96	75	Codominant	15	60					PRESERVE	X				22%	
2497	pin oak	14	14	4.62	75	Codominant	20	60					PRESERVE	X				15%	
2498	black oak	8	8	2.64	40		10	20		X			PRESERVE	X				100%	Removal recommended due to high impact.
2499	oak species	16			0					X			REMOVE			X		N/A	Dead tree.
2500	Virginia pine	11	11	3.63	70	Codominant	10	20					PRESERVE	X				100%	Removal recommended due to high impact.
2501	white oak	13	13	4.29	55	Codominant	10	50					REMOVE					100%	Removal recommended due to high impact.
2701	white oak	31	31	10.23	60	Codominant	25	70					PRESERVE	X				4%	Torsion crack. Decline.
2702	white oak	21	21	6.93	70	Codominant	25	60					PRESERVE	X				9%	
2703	Virginia pine	9			0					X			REMOVE					N/A	Dead tree.
2704	tulip tree	8	8	2.64	80	Codominant	15	60					REMOVE					100%	Removal recommended due to high impact.
2705	white oak	18	18	5.94	60	Codominant	20	40					PRESERVE	X	X			53%	Removal recommended due to high impact. Decline
2706	tulip tree	15	15	4.95	80	Codominant	15	70					PRESERVE	X				No impact	
2707	tulip tree	21	21	6.93	80	Codominant	25	80					PRESERVE	X				18%	
2708	white oak	21	21	6.93	80	Codominant	25	80					REMOVE					13%	
2709	hickory	10	10	3.3	75	Codominant	20	30					REMOVE					100%	Removal recommended due to high impact.
2710	scarlet oak	16	16	5.28	60	Codominant	20	40					REMOVE					100%	Removal recommended due to high impact. Decline.
2711	blackgum	10	10	3.3	50	Codominant	5	30					REMOVE					100%	Removal recommended due to high impact. Decline.
2712	tulip tree	10	10	3.3	75	Intermediate	10	50					REMOVE					5%	
2713	tulip tree	14	14	4.62	65	Codominant	15	50					REMOVE					No impact	
2714	American sycamore	13	13	4.29	65	Codominant	15	40					PRESERVE	X				No impact	
2715	American sycamore	13	13	4.29	60	Codominant	10	20					PRESERVE	X				No impact	
2716	American sycamore	19	19	6.27	65	Codominant	20	60					PRESERVE	X				No impact	
2717	tulip tree	16	16	5.28	60	Codominant	10	30					PRESERVE	X				No impact	
2718	hickory	16	16	5.28	75	Codominant	25	70					PRESERVE	X	X			23%	
2719	white oak	12	12	3.96	70	Codominant	15	30					REMOVE			X		45%	Removal recommended due to high impact. Decline.
2720	white oak	18			0					X			REMOVE			X		N/A	Dead tree.
2721	blackgum	11	11	3.63	80	Codominant	15	60					PRESERVE	X				No impact	
2722	hickory	8	8	2.64	75	Intermediate	10	50					REMOVE					100%	Removal recommended due to high impact.
2723	white oak	18	18	5.94	80	Codominant	20	60					REMOVE					100%	Removal recommended due to high impact.
2724	tulip tree	11	11	3.63	80	Codominant	15	80					REMOVE					100%	Removal recommended due to high impact.
2725	hickory	11	11	3.63	75	Codominant	15	60					REMOVE					22%	
2726	northern red oak	26	26	8.58	80	Codominant	35	80					REMOVE					17%	
2727	blackgum	13			0					X			REMOVE					N/A	Dead tree.
2728	tulip tree	24	24	7.92	75	Codominant	30	70					REMOVE					22%	
2729	red maple	21	21	6.93	70	Codominant	20	60					PRESERVE	X	X			No impact	
2730	tulip tree	11	11	3.63	75	Codominant	15	60					REMOVE					100%	Removal recommended due to high impact.
2731	hickory	17	17	5.61	80	Codominant	20	70					REMOVE					31%	
2732	blackgum	15	15	4.95	50	Codominant	15	20					REMOVE					100%	Removal recommended due to high impact.
2733	tulip tree	22	22	7.26	80	Codominant	25	80					REMOVE					12%	
2734	northern red oak	7	7	2.31	80	Intermediate	10	70					REMOVE					32%	
2735	tulip tree	23	23	7.59	75	Intermediate	30	70					REMOVE					100%	Removal recommended due to high impact.
2736	tulip tree	20	20	6.6	75	Codominant	20	40					PRESERVE	X	X			No impact	
2737	tulip tree	23	23	7.59	75	Codominant	25	60					PRESERVE	X	X			No impact	
2738	tulip tree	22	22	7.26	70	Codominant	20	40					REMOVE					35%	
2739	tulip tree	15	15	4.95	60	Suppressed	15	20					REMOVE					22%	Decline.
2740	tulip tree	22	22	7.26	75	Codominant	20	50					REMOVE			X	X	38%	Long term monitoring recommended. Review during pre-construction.
2741	tulip tree	12	12	3.96	60	Codominant	10	40					REMOVE					100%	Removal recommended due to high impact.
2742	tulip tree	19	19	6.27	70	Codominant	20	50					REMOVE					100%	Removal recommended due to high impact.
2743	tulip tree	16	16	5.28	75	Codominant	10	80					REMOVE					100%	Removal recommended due to high impact.
2744	tulip tree	29	29	9.57	80		30	60					REMOVE			X		100%	Removal recommended due to high impact.
2745	tulip tree	22	22	7.26	75	Codominant	20	40					REMOVE						

TREE INVENTORY NOTE: TREE LABEL 3050 IS NOT USED.

Tree #	Species	Size	CRZ	SRZ	Condition	Canopy Position	Crown Radius	Crown Density	*Dead Tree	*Poor	*Assessment	*Off Site/Co-	Status	Activities				CRZ impacts (critical root zone)	Notes
														*Tree	*Root Prune	*Monitor/Risk	*UFMD Review		
2999	American sycamore	23	23	7.59	75	Codominant	25	60					PRESERVE					34%	Removal recommended due to high impact.
3000	American sycamore	22	22	7.26	75	Codominant	25	60					PRESERVE	X				37%	Removal recommended due to high impact.
3001	red maple	17	17	5.61	70	Codominant	20	70					PRESERVE	X				4%	
3002	American sycamore	16	16	5.28	70	Codominant	20	70					PRESERVE	X				2%	
3003	American sycamore	17	17	5.61	70	Codominant	15	80					PRESERVE	X				No impact	
3004	tulip tree	16	16	5.28	70	Codominant	15	50					PRESERVE	X				No impact	
3205	silver maple	34	34	11.22	75	Isolated	35	80					PRESERVE	X				No impact	
3005	American sycamore	12	12	3.96	75	Codominant	15	70					PRESERVE			X		44%	wrong diameter double check
3006	red maple	13	13	4.29	65	Codominant	15	60					PRESERVE	X				No impact	Patrial past uprooting.
3007	red maple	25	25	8.25	55	Codominant	25	80					PRESERVE	X	X			16%	Severe trunk decay. Leans away from construction area. Decline.
3008	green ash	16			0				X				REMOVE					N/A	Dead tree.
3009	red maple	13	13	4.29	75	Codominant	15	60					PRESERVE	X				No impact	
3010	red maple	9	9	2.97	70	Codominant	10	40					PRESERVE					100%	Removal recommended due to high impact.
3011	pin oak	19	19	6.27	65	Codominant	20	60					REMOVE					100%	Removal recommended due to high impact.
3012	red maple	15	15	4.95	75	Codominant	20	60					REMOVE					100%	Removal recommended due to high impact.
3013	red maple	12	12	3.96	75	Codominant	15	40					PRESERVE	X				No impact	
3014	red maple	22	22	7.26	75	Codominant	25	60					PRESERVE	X				No impact	
3015	red maple	30	30	9.9	60	Codominant	10	20					REMOVE					100%	Removal recommended due to high impact. Decline.
3016	tulip tree	18	18	5.94	80	Codominant	20	70					PRESERVE	X				100%	Removal recommended due to high impact.
3017	red maple	14	14	4.62	75	Codominant	15	60					PRESERVE	X				No impact	
3018	red maple	23	23	7.59	75	Codominant	35	80					REMOVE					100%	Removal recommended due to high impact.
3019	eastern red cedar	15	15	4.95	70	Codominant	10	60					REMOVE					100%	Removal recommended due to high impact.
3020	red maple	10, 8	13	4.29	70	Codominant	15	60					REMOVE					100%	Removal recommended due to high impact.
3021	red maple	14, 10	17	5.61	40	Codominant	10	30		X			REMOVE					100%	Removal recommended due to high impact. 14" leader dead. Decline.
3022	red maple	13	13	4.29	70	Codominant	15	60					REMOVE					100%	Removal recommended due to high impact.
3023	red maple	9	9	2.97	55	Codominant	5	40					REMOVE					100%	Removal recommended due to high impact. Broken top.
3024	green ash	12	12	3.96	70	Codominant	20	70					REMOVE					100%	Removal recommended due to high impact.
3025	elm spp.	21	21	6.93	70	Codominant	20	60					REMOVE					23%	
3026	red maple	14, 14, 13	24	7.92	70	Codominant	25	70					REMOVE			X		100%	Removal recommended due to high impact.
3027	red maple	11	11	3.63	70	Codominant	15	60					REMOVE					100%	Removal recommended due to high impact.
3028	tulip tree	15	15	4.95	70	Codominant	15	40					REMOVE					100%	Removal recommended due to high impact.
3029	red maple	13	13	4.29	75	Codominant	15	70					PRESERVE	X				No impact	
3030	red maple	11	11	3.63	75	Codominant	15	40					REMOVE					12%	
3031	red maple	16, 7	17	5.61	75	Codominant	25	80					REMOVE					100%	Removal recommended due to high impact.
3032	red maple	16	16	5.28	75	Codominant	25	60					PRESERVE	X				No impact	
3033	red maple	13	13	4.29	80	Codominant	15	70					REMOVE					100%	Removal recommended due to high impact.
3034	American sycamore	23	23	7.59	80	Codominant	20	80					REMOVE					100%	Removal recommended due to high impact.
3035	pin oak	18	18	5.94	70	Intermediate	25	60					PRESERVE	X				No impact	
3036	red maple	13	13	4.29	75	Codominant	20	60					REMOVE				X	29%	
3037	tulip tree	23	23	7.59	85	Codominant	25	80					REMOVE				X	27%	
3038	red maple	38	38	12.54	70	Codominant	35	80					REMOVE				X	19%	Large low hanging branch. Evaluate for pruning during pre-construction.
3039	red maple	13	13	4.29	75	Codominant	15	70					PRESERVE	X				17%	
3040	tulip tree	24	24	7.92	80	Codominant	20	80					PRESERVE	X				No impact	
3041	American sycamore	29	29	9.57	80	Codominant	25	70					REMOVE				X	100%	Removal recommended due to high impact.
3042	black cherry	12	12	3.96	60	Codominant	10	40					PRESERVE	X				No impact	
3043	tulip tree	11	11	3.63	40	Isolated	10	20		X			PRESERVE	X	X			6%	Topped for overhead utility
3044	scarlet oak	23, 22	32	10.56	45	Intermediate	20	40		X			PRESERVE		X	X		11%	Severe decline. Severe trunk decay. Leans over road and construction area. Removal is recommended. Evaluate during pre-construction.
3045	white oak	12	12	3.96	65	Intermediate	10	50					REMOVE					23%	
3046	white oak	20	20	6.6	50	Codominant	15	30					REMOVE				X	36%	Severe trunk decay. Decline.
3047	scarlet oak	22	22	7.26	70	Codominant	25	70					PRESERVE	X	X			3%	Decline.
3048	green ash	27			0				X				PRESERVE	X	X			N/A	Dead tree. Topped at 20'.
3049	blackgum	11, 5	12	3.96	65	Codominant	10	30					PRESERVE	X				No impact	
3051	black cherry	15	15	4.95	60	Codominant	15	30					PRESERVE	X				No impact	Decline.
3052	white oak	12, 10	16	5.28	60	Codominant	15	40					PRESERVE	X	X			7%	Decline.
3053	eastern red cedar	13, 9	16	5.28	75	Codominant	15	70					PRESERVE	X				No impact	
3054	white oak	15	15	4.95	65	Codominant	20	70					PRESERVE	X	X	X		5%	Poor anchorage.
3055	white oak	13	13	4.29	40	Codominant	10	30		X			PRESERVE	X	X	X		4%	Severe decline.
3056	hickory	12	12	3.96	70	Codominant	20	70					PRESERVE	X	X	X		10%	Poor anchorage.
3057	pin oak	16	16	5.28	50	Codominant	15	40					PRESERVE	X	X	X		18%	Poor anchorage. Decline.
3058	scarlet oak	12	12	3.96	65	Codominant	15	40					PRESERVE	X	X	X		12%	Poor anchorage.
3059	northern red oak	42	42	13.86	65	Codominant	35	80					REMOVE				X	38%	Removal recommended due to high impact.
3060	flowering cherry	21			0				X				REMOVE				X	N/A	Dead tree.
3061	flowering cherry	12, 6	13	4.29	35	Codominant	5	10		X			REMOVE				X	17%	Severe decline. Near dead.
3062	Callery pear	14, 14	20	6.6	55	Codominant	20	50					PRESERVE	X	X			4%	
3063	Callery pear	12	12	3.96	65	Codominant	15	40					PRESERVE	X				No impact	
3064	black cherry	10, 6	12	3.96	55	Codominant	10	20					REMOVE				X	34%	Decline. 6" leader dead. Removal recommended due to high impact.
3065	hickory	16	16	5.28	65	Codominant	15	70					REMOVE				X	38%	Removal recommended due to high impact.
3066	black cherry	11			0				X				REMOVE				X	N/A	Dead tree.
3067	eastern red cedar	13	13	4.29	65	Codominant	15	40					PRESERVE	X				No impact	Decline.
3068	Callery pear	12, 8	14	4.62	60	Codominant	20	70					PRESERVE	X				No impact	8" Leader dead.
3069	Callery pear	24, 10	26	8.58	65	Codominant	25	70					PRESERVE	X	X			17%	
3070	black cherry	12	12	3.96	65	Codominant	20	60					PRESERVE	X				No impact	
3071	white mulberry	12, 7	14	4.62	65	Codominant	20	70					PRESERVE	X	X			4%	
3072	Callery pear	13	13	4.29	70	Codominant	15	50					PRESERVE	X	X			21%	
3073	Virginia pine	15	15	4.95	65	Codominant	15	50					PRESERVE	X	X			21%	
3074	Virginia pine	12	12	3.96	65	Codominant	10	70					PRESERVE	X	X			7%	
3075	Virginia pine	15	15	4.95	65	Codominant	15	60					PRESERVE	X	X			21%	
3076	Virginia pine	22			0				X				PRESERVE	X				N/A	Dead tree.
3077	black cherry	12			0				X				PRESERVE	X				N/A	Dead tree.
3078	black cherry	12	12	3.96	40	Intermediate	5	20		X			PRESERVE	X				No impact	Decline.

Tree #

Tree #	Species	Size	CRZ	SRZ	Condition	Canopy Position	Crown Radius	Crown Density	*Dead Tree	*Poor	*Assessment	*Off Site/Co-	Status	Activities				CRZ impacts (critical root zone)	Notes
														*Tree	*Root Prune	*Monitor/Risk	*UFMD Review		
		dbh	Critical Root Zone (radius ft)	Structural Rooting Zone (radius ft)	%		Avg. Radius (ft)	%											
3163	northern red oak	23	23	7.59	70	Codominant	20	40					REMOVE				X	12%	
3164	hornbeam	9	9	2.97	70	Intermediate	10	40					REMOVE				X	16%	
3165	American holly	6	6	1.98	70	Understory	5	70					REMOVE				X	4%	
3166	American holly	6	6	1.98	65	Understory	5	50					REMOVE				X	19%	
3167	blackgum	11	11	3.63	65	Intermediate	15	70					REMOVE				X	No impact	
3168	tulip tree	30	30	9.9	75	Codominant	25	70					PRESERVE	X	X			5%	
3169	blackgum	14	14	4.62	75	Codominant	15	30					REMOVE				X	5%	
3170	American holly	8	8	2.64	75	Intermediate	10	80					REMOVE				X	100%	Removal recommended due to high impact.
3171	black oak	25	25	8.25	70	Codominant	20	30					REMOVE				X	14%	
3172	American holly	8	8	2.64	75	Intermediate	10	60					REMOVE				X	No impact	
3173	red maple	14	14	4.62	75	Codominant	15	50					PRESERVE	X	X			No impact	
3174	blackgum	10	10	3.3	60	Intermediate	5	20					REMOVE				X	No impact	Decline.
3175	northern red oak	33	33	10.89	75	Codominant	35	80					REMOVE				X	33%	
3176	American holly	8	8	2.64	80	Understory	10	60					REMOVE				X	No impact	
3177	red maple	13	13	4.29	75	Codominant	15	50					REMOVE				X	14%	
3178	blackgum	10	10	3.3	65	Intermediate	10	30					REMOVE				X	24%	Decline.
3179	tulip tree	21	21	6.93	55	Codominant	15	30					REMOVE				X	100%	Removal recommended due to high impact. Decline.
3180	American holly	13	13	4.29	75	Understory	10	70					REMOVE				X	31%	
3181	red maple	22	22	7.26	80	Codominant	20	70					REMOVE				X	11%	
3182	red maple	18	18	5.94	75	Codominant	20	40					REMOVE				X	43%	Removal recommended due to high impact.
3183	northern red oak	10	10	3.3	75	Codominant	15	60					PRESERVE	X				No impact	
3184	red maple	27	27	8.91	75	Codominant	25	70					REMOVE				X	13%	
3185	northern red oak	33	33	10.89	75	Codominant	25	70					REMOVE				X	19%	
3186	red maple	10	10	3.3	65	Intermediate	10	60					REMOVE				X	100%	Removal recommended due to high impact.
3187	tulip tree	10	10	3.3	45	Intermediate	5	10		X			REMOVE				X	100%	Removal recommended due to high impact.
3188	hornbeam	7	7	2.31	75	Intermediate	10	80					REMOVE				X	100%	Removal recommended due to high impact.
3189	hornbeam	6	6	1.98	65	Intermediate	10	70					REMOVE				X	28%	
3190	red maple	30	30	9.9	70	Codominant	30	80					REMOVE				X	100%	Removal recommended due to high impact.
3191	American holly	6	6	1.98	85	Understory	5	80					REMOVE				X	No impact	
3192	hickory	8	8	2.64	80	Codominant	10	70					REMOVE				X	100%	Removal recommended due to high impact.
3193	red maple	18	18	5.94	70	Codominant	20	70					REMOVE				X	100%	Removal recommended due to high impact.
3194	red maple	29	29	9.57	60	Codominant	20	60					REMOVE				X	39%	Removal recommended due to high impact. Decline.
3195	tulip tree	28,22	36	11.88	60	Codominant	20	60					PRESERVE	X	X			25%	Decline.
3196	tulip tree	20			0					X			REMOVE				X	N/A	Dead tree.
3197	red maple	12	12	3.96	75	Codominant	15	60					PRESERVE	X				No impact	
3198	pin oak	31	31	10.23	55	Codominant	20	50					REMOVE				X	14%	
3199	red maple	36	36	11.88	70	Codominant	25	70					REMOVE				X	100%	Removal recommended due to high impact.
3200	tulip tree	28	28	9.24	75	Codominant	25	60					REMOVE				X	100%	Removal recommended due to high impact.
3201	red maple	15.8	17	5.61	65	Intermediate	20	70					REMOVE				X	12%	
3202	eastern white pine	11	11	3.63	75	Intermediate	15	70					REMOVE				X	No impact	
3203	green ash	32	32	10.56	60	Codominant	30	70					REMOVE				X	15%	Evidence of ash borer. Decline.
3204	pin oak	23	23	7.59	70	Intermediate	25	80					REMOVE				X	15%	
3450	blackgum	13	13	4.29	75	Codominant	20	60					PRESERVE	X				No impact	

dbh = Diameter at Breast Height (measured 4.5 feet above ground).
CRZ = Critical Root Zone = 1.0 foot radius per inch of tree diameter. Estimated radius of area containing majority of tree roots. TRZ values for trees with multiple stems were calculated using the diameter of a SRZ (Structural Rooting Zone). Calculation - dbh x 0.33 = radius feet. Estimated radius of area containing tree roots that must be protected to ensure tree health and structural stability. Impact/root loss within

* CONDITION RATING - provided as percentages based on methods outlined in the 10th edition of the Guide for Plant Appraisal, published by the International Society of Arboriculture.
* DEAD TREE - tree is dead or near dead and will likely not survive long term. No tree canopy credit taken.
* POOR CONDITION TREE - Tree has been assessed with condition of < 40 or Arborist has determined that tree will likely not survive long term due to poor health, structure or other contributing factors.
* ASSESSMENT OBSCURED - Proper assessment of root flare, trunk, scaffold branches and leaf/twigs obscured by presence of heavy vines, limited access, or similar obstacle. Condition of these trees is
* OFF SITE/CO-OWNED TREE - Tree is either off site or co-owned or definitive ownership could not be determined during initial tree inventory. Ownership shall be determined during pre-construction phase of development. Removal or arboricultural treatment of off site trees is prohibited without written permission from landowner. Location and diameter measurements are "estimated" and the trees condition

TREE PRESERVATION ACTIVITIES

*TREE PROTECTION FENCING - Tree protection fencing shall be installed where indicated on plan sheets. See tree preservation notes and tree protection fencing detail.
* ROOT PRUNING - Trees shall be root pruned where indicated on plan sheets. See tree preservation notes and root pruning detail.
* TREE MULCHING - Mulch shall be applied where indicated on plan sheets. Mulch to be spread on grade within tree save areas where root pruning has occurred. Mulch shall be applied to a depth of 4" inches
* PRUNE - Prune tree for health & maintenance. Deadwood prune dead, dying or diseased branches 2" in diameter or greater. All pruning work shall meet or exceed standards most recently publish standard
* FERTILIZE -
* CAMBISTAT -
* VINE REMOVAL - Removal of vines that impact roots, trunk, or canopy. Vines impacting roots/trunk shall be cut at base of tree and 4' section removed from trunk. Vines impacting tree canopy shall be cut free
* REMOVE DEBRIS - Remove foreign debris from trunk, root flare or root zone of tree.
* TRIM GIRDLING ROOTS - See "General Tree Health Notes" for girdling root removal procedures.
* EXPOSE ROOT FLARE - Tree root flare covered in soil. See "General Tree Health Notes" for soil removal procedures.
* MONITOR/RISK ASSESSMENT - Tree to be impacted by construction or exhibits pre-existing condition(s) that may present elevated risk of decline or failure in the future. Tree should be evaluated by certified
* UFMD REVIEW - Tree may require additional assessment at time of construction. County/Town Urban Forestry Management Division or Project Arborist should evaluate tree during pre-construction meeting to
* HAND REMOVAL - Trees to be removed within tree save areas or directly adjacent to but within the limits of clearing and grading shall be felled by hand with a chain saw. Stumps shall remain in place or shall
* RISK ASSESSMENTS - No formal risk assessment were performed on trees included within this tree inventory or any other trees located on or adjacent to the subject property.

Tree Survey Information Completed by Tree Preservation Consultants, LLC - Arborist Brian Howard - ISA #MA-4677A

TREE INVENTORY NOTE:
TREE NUMBERS "2502 THROUGH 2700" AND "3050" ARE NOT USED.

TREE INVENTORY SUMMARY:
TOTAL TREES SURVEYED = 706

TREES INSIDE OF THE LIMITS OF DISTURBANCE
• TREES TO BE REMOVED = 178 PROJECT TOTAL

TREES OUTSIDE OF THE LIMITS OF DISTURBANCE
• PRESERVED TREES = 407 PROJECT TOTAL
• TREES TO BE REMOVED = 120 PROJECT TOTAL

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. NGUYEN
DRAWN BY: A. NGUYEN
SHEET CHK'D BY: A. YEAGLE
CROSS CHK'D BY: C. HENEGAR
APPROVED BY: C. HENEGAR
DATE: AUGUST 2024




10306 Eaton Place, Suite 500
Fairfax, VA 22030
Tel: (703) 691-6500

RINKER DESIGN ASSOC.
11109 Endeavor Court
Suite 200
Manassas, VA 20109

FAIRFAX COUNTY, VIRGINIA
DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
TYSONS WASTEWATER CONVEYANCE SYSTEM
MODIFICATIONS
PACKAGE 4: FORCE MAIN

**TREE PRESERVATION PLAN
AND PLANTING PLAN
EXISTING TREE INVENTORY**

PROJECT NO. 5003-244105
FILE NAME: 40-44 TREE INV
SHEET NO.
TP-44

Typical Traffic Control
Shoulder Operation with Minor Encroachment
(Figure TTC-5.2)

NOTES

Standard

- 1. For required sign assemblies for multi-lane roadways see Note 1, TTC-4.1
2. Sign spacing should be 1300'-1500' for Limited Access highways. For all other roadways, the sign spacing should be 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.
3. When work takes up part of a lane on a high volume roadway, vehicular traffic volumes, vehicle mix, speed and capacity should be analyzed to determine whether the affected lane should be closed. Unless the lane encroachment analysis permits a remaining lane width of 10 feet, the lane should be closed. If the closure operation is on a Limited Access highway, the minimum lane width is 11 feet.

Option:

- 4. The ROAD WORK AHEAD (W20-1) sign on an intersecting roadway may be omitted where drivers emerging from that roadway will encounter another advance warning sign prior to this activity area.

Standard:

- 5. A shadow vehicle with either an arrow board operating in the caution mode, or at least one high-intensity amber rotating, flashing, or oscillating light shall be parked 80' - 120' in advance of the first work crew.
6. Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, or oscillating lights. Vehicle hazard warning signals can be used to supplement high-intensity amber rotating, flashing, or oscillating lights.
7. Taper length (L) and channelizing device spacing shall be at the following:

Table with 4 columns: Speed Limit (mph), Lane Width (Feet), Taper Length L, and Remarks. It provides data for various speed limits and lane widths.

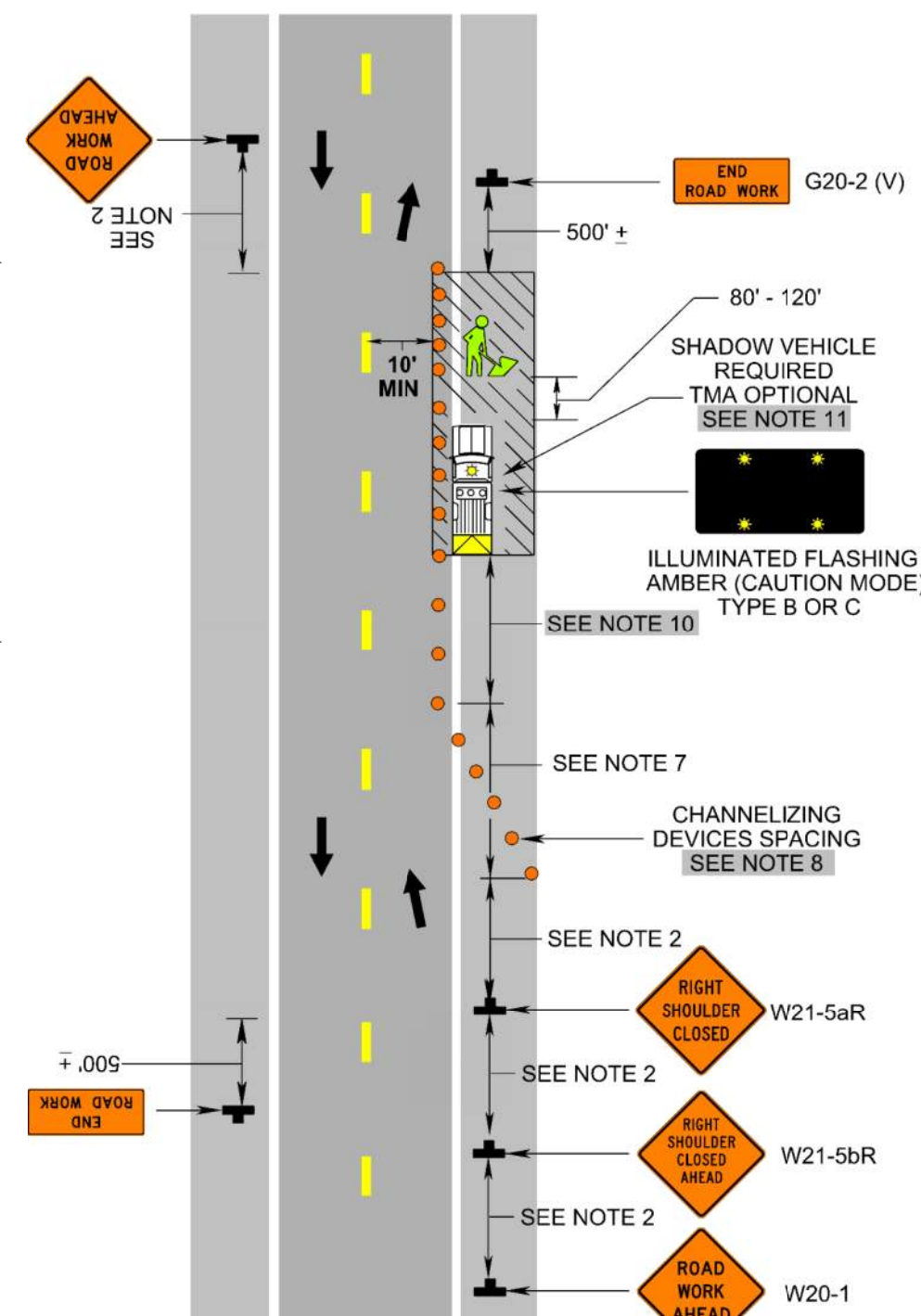
- 8. Channelizing device spacing shall be at the following:

Table with 4 columns: Location Spacing, Speed Limit (mph), Location Spacing, and Speed Limit (mph). It details channelizing device spacing for different speed limits and locations.

- 9. On roadways with paved shoulders having a width of 8 feet or more, channelizing devices shall be used to close the shoulder in advance of the merging taper to direct vehicular traffic to remain within the traveled way.
10. The buffer space length shall be as shown in Table 6H-3 on Page 6H-5 for the posted speed limit.
11. A truck-mounted attenuator (TMA) shall be used on Limited Access highways and multi-lane roadways with posted speed limit equal to or greater than 45 mph.
12. When a side road intersects the highway within the temporary traffic control zone, additional traffic control devices shall be placed as needed.

1: Revision 1 - 4/1/2015
2: Revision 2 - 9/1/2019

Shoulder Operation with Minor Encroachment
(Figure TTC-5.2)



1: Revision 1 - 4/1/2015
2: Revision 2 - 9/1/2019

Typical Traffic Control
Lane Closure on a Two-Lane Roadway Using Flaggers
(Figure TTC-23.2)

NOTES

Guidance:

- 1. Sign spacing distance should be 350'-500' where the posted speed limit is 45 mph or less, and 500'-800' where the posted speed limit is greater than 45 mph.
2. Care should be exercised when establishing the limits of the work zone to insure maximum possible sight distance in advance of the flagger station and transition, based on the posted speed limit and at least equal to or greater than the values in Table 6H-3. Generally speaking, motorists should have a clear line of sight from the graphic flagger symbol sign to the flagger.
3. To maintain efficient traffic flow in a flagging operation on a two-lane roadway, the maximum time motorists should be stopped at a flagger station is 8 minutes for high volume roadways (average daily traffic of 500 or more vehicles per day) to a maximum of 12 minutes for low volume roadways (less than 500 vehicles per day). For additional information see Section 6E.07.2

Standard:

- 4. Portable Temporary Rumble Strips (PTRS) shall be used as noted in Section 6F.99.
5. Flagging stations shall be located far enough in advance of the work space to permit approaching traffic to reduce speed and/or stop before passing the work space and allow sufficient distance for departing traffic in the left lane to return to the right lane before reaching opposing traffic (see Table 6H-3 on Page 6H-5).
6. All flaggers shall be state certified and have their certification card in their possession when performing flagging duties (see Section 6E.01, Qualifications for Flaggers).
7. Cone spacing shall be based on the posted speed and the values in Table 6H-4 on Page 6H-6.1
8. A shadow vehicle with at least one high intensity amber rotating, flashing, or oscillating light shall be parked 80'-120' in advance of the first work crew.

Option:

- 8. A SLOW (W21-V10) sign may be required in this area to give advance warning of the operation ahead by slowing approaching traffic prior to reaching the flagger station or queued traffic.

Guidance:

- 9. If the queue of traffic reaches the BE PREPARED TO STOP (W3-4) sign then the signs, and if used the PTRS, should be readjusted at greater distances.
10. When a highway-rail crossing exists within or upstream of the transition area and it is anticipated that queues resulting from the lane closure might extend through the highway-rail grade crossing, the temporary traffic control zone should be extended so that the transition area precedes the highway-rail crossing (see Figure TTC-36 for additional information on highway-rail crossings).

Standard:

- 11. At night, flagger stations shall be illuminated, except in emergencies (see Section 6E.08).

Option:

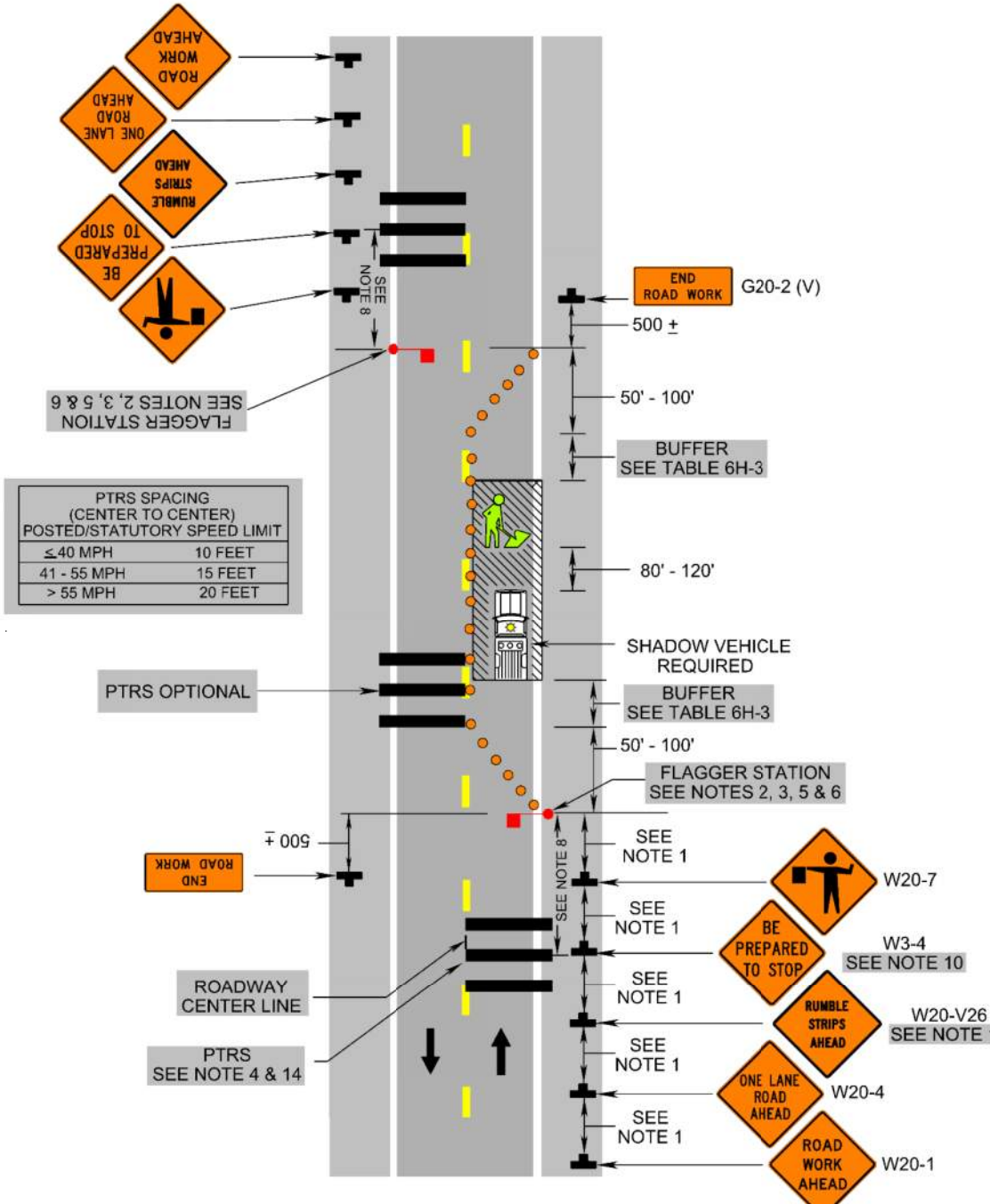
- 12. Cones may be eliminated when using a pilot vehicle operation or when the total roadway width is 20 feet or less.
13. For low-volume situations with short work zones on straight roadways where the flagger is visible to road users approaching from both directions, a single flagger, positioned to be visible to road users approaching from both directions, may be used (see Chapter 6E).

Standard:

- 14. When used, three portable temporary rumble (PTRS) strips shall be installed across the entire travel lane adjacent to the BE PREPARED TO STOP (W3-4) sign. The portable temporary rumble strips shall be monitored and adjusted as necessary during the work shift to ensure proper placement on the roadway. When the PTRS are installed, the RUMBLE STRIPS AHEAD (W20-V26) sign shall also be utilized.

1: Revision 1 - 4/1/2015
2: Revision 2 - 9/1/2019

Lane Closure on a Two-Lane Roadway Using Flaggers
(Figure TTC-23.2)



1: Revision 1 - 4/1/2015
2: Revision 2 - 9/1/2019
3: Revision 2.1 - 11/1/2020

Typical Traffic Control
Lane Closure Operation in an Intersection
(Figure TTC-28.2)

NOTES

Guidance:

- 1. The control of traffic through the intersection in order of preference should be:
a. Obtain the services of law enforcement personnel.
b. Detour the effective routes to other roads and streets as approved and directed by the District Traffic Engineer.
c. Place a state certified flagger on each leg of the intersection controlling a single lane of traffic. Appropriate signing as shown should be used for law enforcement and flagging operations. For detour signs see Figure TTC-34.
2. Sign spacing distance should be 350'-500' where the posted speed limit is 45 mph or less, 500'-800' where the posted speed limit is greater than 45 mph.
3. To maintain efficient traffic flow in a flagging operation on a two-lane roadway the maximum time motorists should be stopped at a flagger station is 8 minutes for high volume roadways (average daily traffic of 500 or more vehicles per day) to a maximum of 12 minutes for low volume roadways (less than 500 vehicles per day). For additional information see Section 6E.07.2

Standard:

- 4. Channelizing device spacing shall be on 20' centers or less.
5. PTRS shall be used as noted in Section 6F.99.2

Guidance:

- 6. If room permits, a shadow vehicle with at least one rotating amber light or high intensity amber flashing or oscillating light should be parked 80'-120' in advance of the first work crew.

Standard:

- 7. For emergency situations (any non-planned operation) of 30 minutes or less duration, two rotating amber lights or high intensity amber flashing or oscillating lights mounted on the vehicle and visible for 360° shall be required in addition to the channelizing devices shown around the vehicle. Also, vehicle hazard warning signals shall be used.

Guidance:

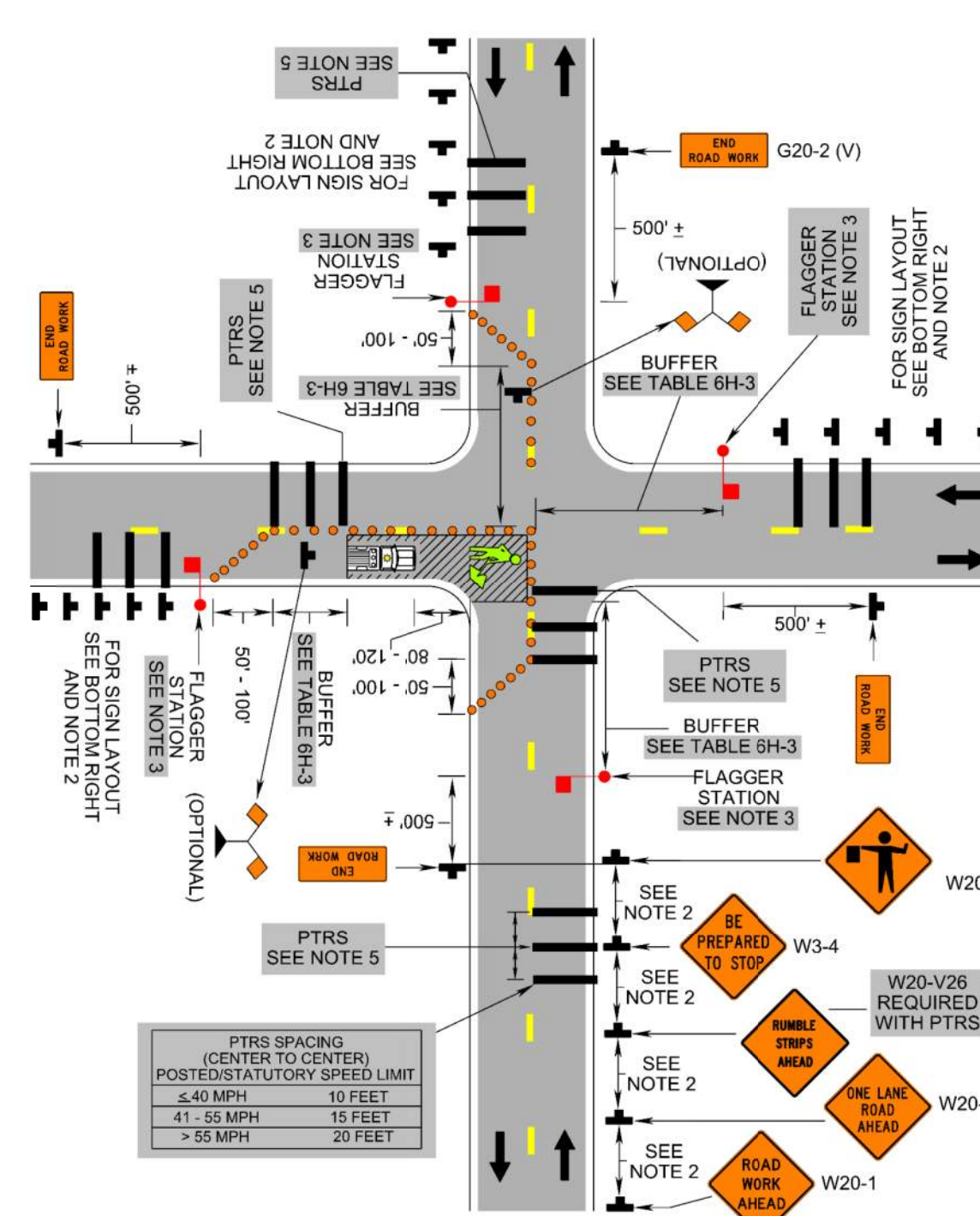
- 8. If the work space extends across a crosswalk, the crosswalk should be closed using the information and devices shown in Figure TTC-36.

Support:

- 9. Turns can be prohibited as required by vehicular traffic conditions. Unless the streets are wide, it might be physically impossible to make certain turns, especially for large vehicles.

1: Revision 1 - 4/1/2015
2: Revision 2 - 9/1/2019

Lane Closure Operation in an Intersection
(Figure TTC-28.2)



2: Revision 2 - 9/1/2019

Table with 5 columns: REV. NO., DATE, DRWN, CHKD, REMARKS. It is a revision control table.

Table with 2 columns: Field name and value. Fields include DESIGNED BY, DRAWN BY, SHEET CHK'D BY, CROSS CHK'D BY, APPROVED BY, and DATE.

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FAIRFAX COUNTY, VIRGINIA
DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES
TYSONS WASTEWATER CONVEYANCE SYSTEM
MODIFICATIONS
PACKAGE 4: FORCE MAIN

TRAFFIC CONTROL GENERAL NOTES II

Table with 2 columns: Field name and value. Fields include PROJECT NO., FILE NAME, SHEET NO., and MT-2.

PHASING NOTES

PHASE 1 (FLINT HILL ROAD, VALE ROAD SERVICE ROAD, S-672 VALE ROAD (CROSSING), AND RIVERIA DRIVE)

USING VIRGINIA WORK AREA PROTECTION MANUAL TTC-23.2 LANE CLOSURE ON A TWO-WAY ROADWAY USING FLAGGERS, CONSTRUCT THE PROPOSED 36" FORCE MAIN SEWERLINE FROM STA. 00+00 TO STA. 37+68. FOR ANY INTERSECTING ROADWAY WITHIN THE LIMITS OF THE FLAGGING OPERATION AS DESCRIBED ABOVE, UTILIZE VIRGINIA WORK AREA PROTECTION MANUAL TTC-28.2 LANE CLOSURE OPERATION IN AN INTERSECTION. CLOSE SUFFICIENT ROADWAY LENGTH SUCH THAT ONLY ONE DAY'S WORK IS WITHIN THE LIMITS OF THE WORK AREA.

PHASE 2 (TANGLEWOOD PARK TRAIL BETWEEN RIVERIA DRIVE AND RHAPSODY DRIVE)

AWAY FROM TRAFFIC, USING VIRGINIA WORK AREA PROTECTION MANUAL TTC-35.1 SIDEWALK CLOSURE AND BYPASS SIDEWALK OPERATION, CONSTRUCT THE PROPOSED 36" FORCE MAIN SEWERLINE FROM STA. 37+68 TO STA. 43+87. PLACE APPROPRIATE TEMPORARY CONSTRUCTION FENCE AROUND THE WORK AREA.

PHASE 3 (RHAPSODY DRIVE, ABBOTSFORD DRIVE, AND S-673 LAWYERS ROAD (CROSSING))

USING VIRGINIA WORK AREA PROTECTION MANUAL TTC-5.2 SHOULDER OPERATION WITH MINOR ENCROACHMENT, CONSTRUCT THE PROPOSED 36" FORCE MAIN SEWERLINE FROM STA. 43+87 TO STA. 63+00 AND FROM STA. 65+00 TO STA. 88+00. FOR ANY INTERSECTING ROADWAY WITHIN THE LIMITS OF THE MINOR ENCROACHMENT OPERATION AS DESCRIBED ABOVE, UTILIZE VIRGINIA WORK AREA PROTECTION MANUAL TTC-28.2 LANE CLOSURE OPERATION IN AN INTERSECTION. USING VIRGINIA WORK AREA PROTECTION MANUAL TTC-28.2 LANE CLOSURE OPERATION IN AN INTERSECTION, CONSTRUCT THE PROPOSED 36" FORCED MAIN SEWERLINE FROM STA. 63+00 TO STA. 65+00. WHEN SUFFICIENT TWO WAY TWO LANE TRAVEL WIDTH CAN NOT BE MAINTAINED, UTILIZE VIRGINIA WORK AREA PROTECTION MANUAL TTC-23.2 LANE CLOSURE ON A TWO-WAY ROADWAY USING FLAGGERS, OR VIRGINIA WORK AREA PROTECTION MANUAL TTC-28.2 LANE CLOSURE OPERATION WHEN NEAR AN INTERSECTION. CLOSE SUFFICIENT ROADWAY LENGTH SUCH THAT ONLY ONE DAY'S WORK IS WITHIN THE LIMITS OF THE WORK AREA.

PHASE 4 (CROSSING WASHINGTON AND OLD DOMINION TRAIL AND OTHER PATHS BETWEEN ABBOTSFORD DRIVE AND PRELUDE DRIVE)

AWAY FROM TRAFFIC, USING VIRGINIA WORK AREA PROTECTION MANUAL TTC-35.1 SIDEWALK CLOSURE AND BYPASS SIDEWALK OPERATION, CONSTRUCT THE PROPOSED 36" FORCE MAIN SEWERLINE FROM STA. 88+00 TO STA. 103+50. PLACE APPROPRIATE TEMPORARY CONSTRUCTION FENCE AROUND THE WORK AREA.

PHASE 5 (PRELUDE DRIVE)

USING VIRGINIA WORK AREA PROTECTION MANUAL TTC-48.2 ROAD CLOSURE OPERATION WITH A DETOUR, CLOSE THE CUL-DE-SAC END TO CONSTRUCT THE PROPOSED 36" FORCE MAIN SEWERLINE FROM STA. 103+50 TO STA. 105+50. PLACE TYPE 3 BARRICADES TO CLOSE THE ENTIRE ROADWAY WIDTH OF THE CUL-DE-SAC.

PHASE 6 (BETWEEN PRELUDE DRIVE AND ABBOTSFORD DRIVE)

AWAY FROM TRAFFIC, USING VIRGINIA WORK AREA PROTECTION MANUAL TTC-35.1 SIDEWALK CLOSURE AND BYPASS SIDEWALK OPERATION, CONSTRUCT THE PROPOSED 36" FORCE MAIN SEWERLINE FROM STA. 105+50 TO STA. 110+00. PLACE APPROPRIATE TEMPORARY CONSTRUCTION FENCE AROUND THE WORK AREA.

PHASE 7 (ABBOTSFORD DRIVE AND S-675 BEULAH ROAD (CROSSING))

REFER TO SHEETS MT-5 THRU MT-9.

USING VIRGINIA WORK AREA PROTECTION MANUAL TTC-44.2 MEDIAN CROSS-OVER OPERATION ON A MULTI-LANE ROADWAY, CONSTRUCT THE PROPOSED 36" FORCE MAIN SEWERLINE FROM STA. 110+00 TO STA. 128+00 AND FROM STA. 130+00 TO STA. 147+00. USING VIRGINIA WORK AREA PROTECTION MANUAL TTC-28.2 LANE CLOSURE OPERATION IN AN INTERSECTION, CONSTRUCT THE PROPOSED 36" FORCE MAIN SEWERLINE FROM STA. 128+00 TO STA. 130+00. ALLOW LOCAL TRAFFIC BEHIND ROAD CLOSED BARRICADES FOR DRIVEWAY ACCESS. ACCESS TO DRIVEWAYS SHALL BE MAINTAINED AT ALL TIMES IN AT LEAST 1 OF THE 2 ACCESS POINTS ON THE MEDIAN CROSS-OVER. WHEN SUFFICIENT TWO WAY TWO LANE TRAVEL WIDTH CAN NOT BE MAINTAINED, UTILIZE VIRGINIA WORK AREA PROTECTION MANUAL TTC-23.2 LANE CLOSURE ON A TWO-WAY ROADWAY USING FLAGGERS, OR VIRGINIA WORK AREA PROTECTION MANUAL TTC-28.2 LANE CLOSURE OPERATION WHEN NEAR AN INTERSECTION. WHEN WORKING WITHIN THE LIMITS OF THE RAISED MEDIAN, UTILIZE VIRGINIA WORK AREA PROTECTION MANUAL TTC-5.2 SHOULDER OPERATION WITH MINOR ENCROACHMENT. W21-5BL (LEFT SHOULDER CLOSED AHEAD) SHALL BE USED IN LIEU OF W21-5BR AND W21-5AL (LEFT SHOULDER CLOSED) SHALL BE USED IN LIEU OF W21-5AR IN BOTH DIRECTIONS ON ABBOTSFORD DRIVE. PLACE TYPE 3 BARRICADES SUPPLEMENTED WITH R11-2 (ROAD CLOSED) AND M4-10R (RIGHT DETOUR ARROW) ALONG THE SOUTH SIDE OF THE WORK AREA TO PROVIDE GUIDANCE TO TRAFFIC FROM ST ROMAN DRIVE AND MIDLOTHIAN COURT. CLOSE SUFFICIENT ROADWAY LENGTH SUCH THAT ONLY ONE DAY'S WORK IS WITHIN THE LIMITS OF THE WORK AREA.

PHASE 8 (CROSSING PATH BETWEEN ABBOTSFORD DRIVE AND S-677 OLD COURTHOUSE ROAD)

AWAY FROM TRAFFIC, USING VIRGINIA WORK AREA PROTECTION MANUAL TTC-35.1 SIDEWALK CLOSURE AND BYPASS SIDEWALK OPERATION, CONSTRUCT THE PROPOSED 36" FORCE MAIN SEWERLINE FROM STA. 147+00 TO STA. 152+00. PLACE APPROPRIATE TEMPORARY CONSTRUCTION FENCE AROUND THE WORK AREA.

PHASE 9 (S-677 OLD COURTHOUSE ROAD)

REFER TO SHEET MT-10.

USING VIRGINIA WORK AREA PROTECTION MANUAL TTC-48.2 ROAD CLOSURE OPERATION WITH A DETOUR, CONSTRUCT THE PROPOSED 36" FORCE MAIN SEWERLINE FROM STA. 152+00 TO STA. 165+00. ALLOW LOCAL TRAFFIC BEHIND ROAD CLOSED BARRICADES FOR DRIVEWAY ACCESS. ACCESS TO DRIVEWAYS SHALL BE MAINTAINED AT ALL TIMES IN AT LEAST 1 OF THE 2 ACCESS POINTS FROM THE DETOUR POINT. THE ENGINEER SHALL ADD TYPE 3 BARRICADES SUPPLEMENTED WITH R11-2 (ROAD CLOSED) SUFFICIENT TO CLOSE THE ROADWAY ONLY WHERE THE WORK IS ACTUALLY BEING PERFORMED.

PHASE 10 (S-677 OLD COURTHOUSE ROAD)

USING VIRGINIA WORK AREA PROTECTION MANUAL TTC-23.2 LANE CLOSURE ON A TWO-WAY ROADWAY USING FLAGGERS, CONSTRUCT THE PROPOSED 36" FORCE MAIN SEWERLINE FROM STA. 165+00 TO STA. 192+00. FOR ANY INTERSECTING ROADWAY WITHIN THE LIMITS OF THE FLAGGING OPERATION AS DESCRIBED ABOVE, UTILIZE VIRGINIA WORK AREA PROTECTION MANUAL TTC-28.2 LANE CLOSURE OPERATION IN AN INTERSECTION. CLOSE SUFFICIENT ROADWAY LENGTH SUCH THAT ONLY ONE DAY'S WORK IS WITHIN THE LIMITS OF THE WORK AREA.

PHASE 11 (WESTWOOD DRIVE, PINE VALLEY DRIVE, HIGDON DRIVE, AND VESPER STREET)

USING VIRGINIA WORK AREA PROTECTION MANUAL TTC-5.2 SHOULDER OPERATION WITH MINOR ENCROACHMENT, CONSTRUCT THE PROPOSED 36" FORCE MAIN SEWERLINE FROM STA. 192+00 TO STA. 213+78. FOR ANY INTERSECTING ROADWAY WITHIN THE LIMITS OF THE MINOR ENCROACHMENT OPERATION AS DESCRIBED ABOVE, UTILIZE VIRGINIA WORK AREA PROTECTION MANUAL TTC-28.2 LANE CLOSURE OPERATION IN AN INTERSECTION. WHEN SUFFICIENT TWO WAY TWO LANE TRAVEL WIDTH CAN NOT BE MAINTAINED, UTILIZE VIRGINIA WORK AREA PROTECTION MANUAL TTC-23.2 LANE CLOSURE ON A TWO-WAY ROADWAY USING FLAGGERS, OR VIRGINIA WORK AREA PROTECTION MANUAL TTC-28.2 LANE CLOSURE OPERATION WHEN NEAR AN INTERSECTION. CLOSE SUFFICIENT ROADWAY LENGTH SUCH THAT ONLY ONE DAY'S WORK IS WITHIN THE LIMITS OF THE WORK AREA.

PHASE 12 (PARKING LOT)

AWAY FROM TRAFFIC, USING VIRGINIA WORK AREA PROTECTION MANUAL TTC-35.1 SIDEWALK CLOSURE AND BYPASS SIDEWALK OPERATION, CONSTRUCT THE PROPOSED 36" FORCE MAIN SEWERLINE FROM STA. 213+78 TO STA. 233+93. PLACE APPROPRIATE TYPE 3 BARRICADES AND TEMPORARY CONSTRUCTION FENCE AROUND THE WORK AREA. CLOSE SUFFICIENT PARKING LOT AREA SUCH THAT ONLY ONE DAY'S WORK IS WITHIN THE LIMITS OF THE WORK AREA.

REV. NO.	DATE	DRWN	CHKD	REMARKS

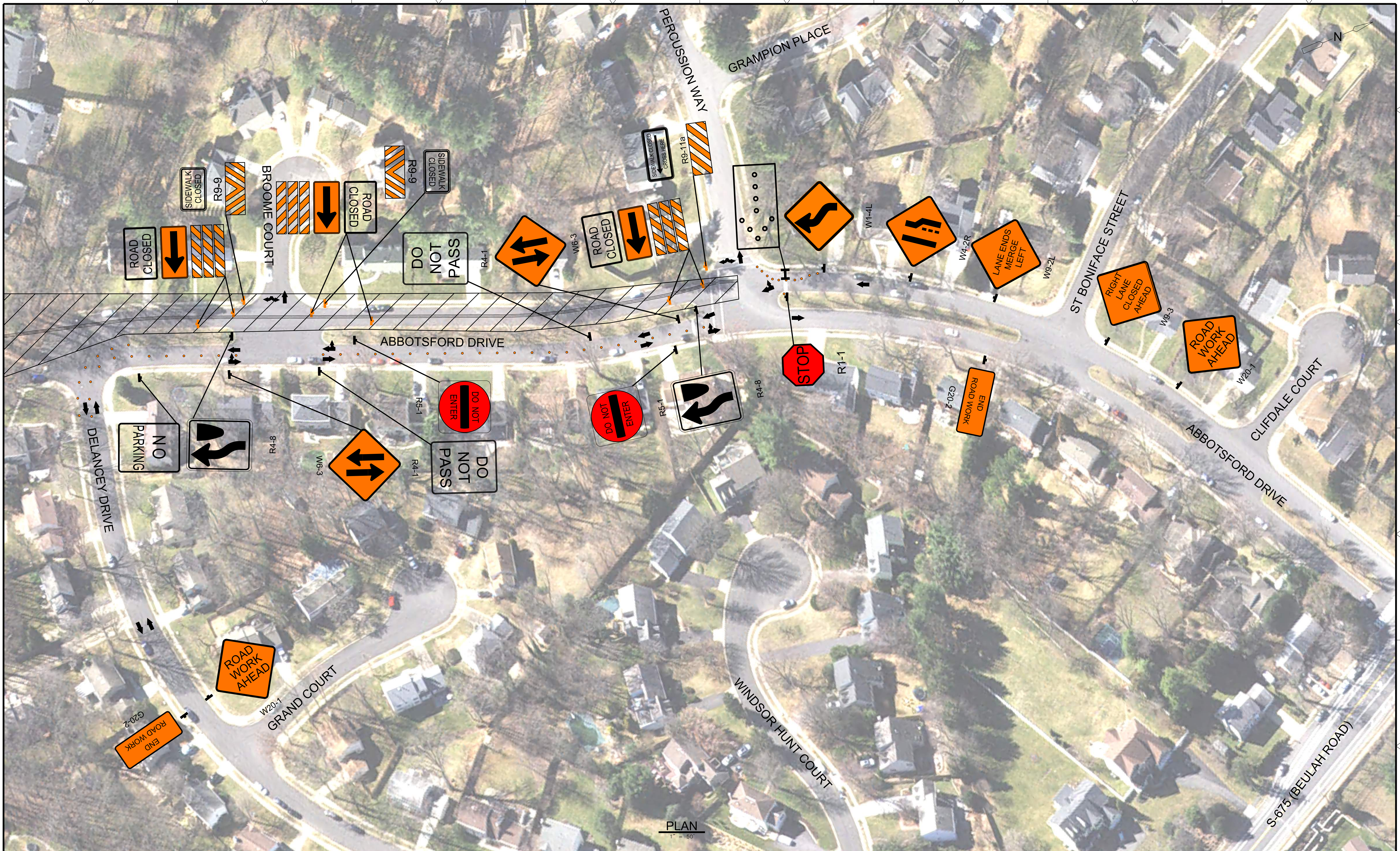
DESIGNED BY: _____ K. SABO
DRAWN BY: _____ K. SABO
SHEET CHK'D BY: _____ K. PERSIANI
CROSS CHK'D BY: _____
APPROVED BY: _____
DATE: _____ AUGUST 2024



FAIRFAX COUNTY, VIRGINIA
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TRAFFIC CONTROL PHASING NOTES

PROJECT NO. 5003-244105
FILE NAME: MT-4.DGN
SHEET NO. MT-4



PLAN
1" = 50'

REV. NO.	DATE	DRWN	CHKD	REMARKS

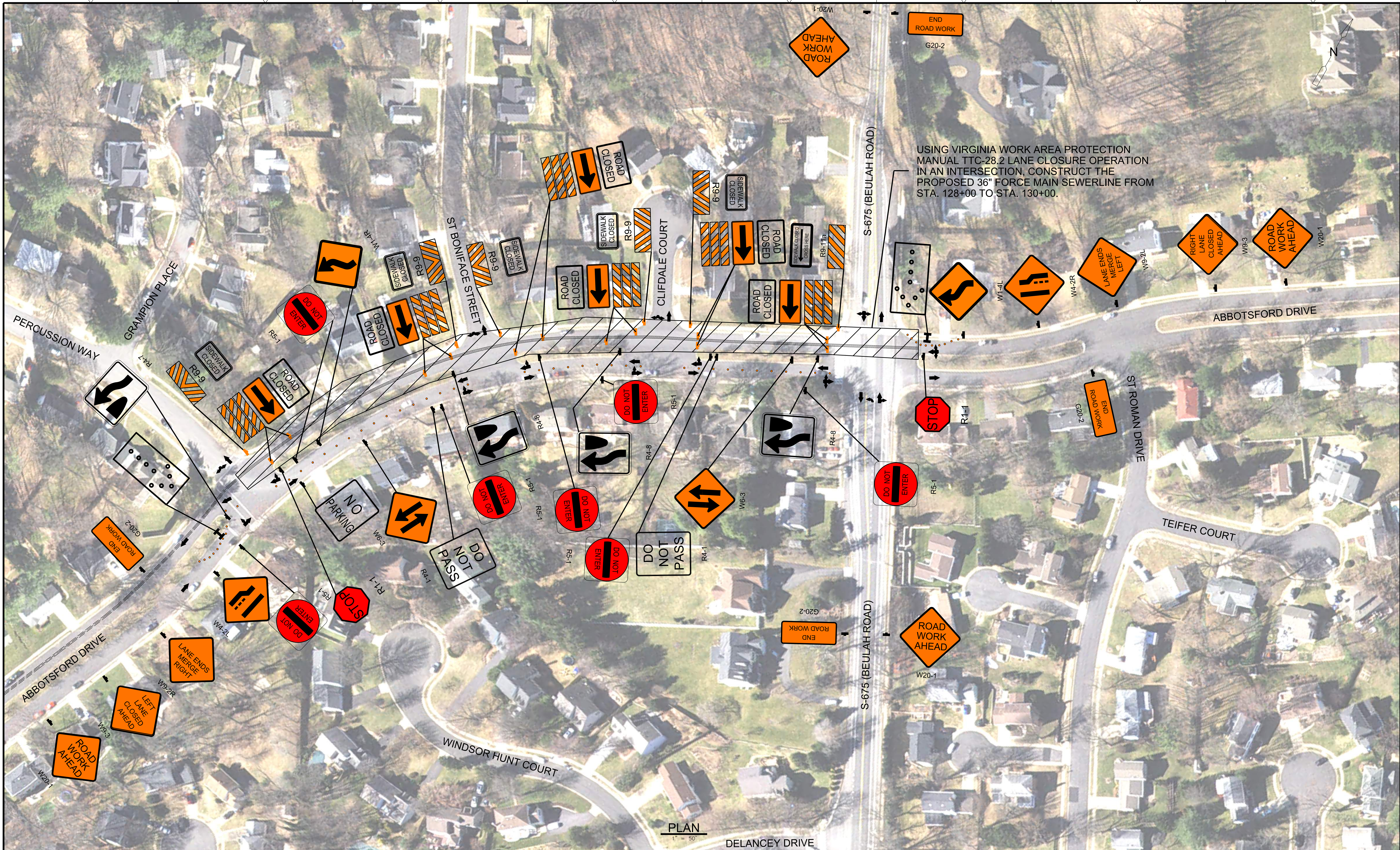
DESIGNED BY: K. SABO
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PHASE 7 TRAFFIC CONTROL
 ABBOTSFORD DRIVE
 STA 110+00 TO STA 119+51

PROJECT NO. 5003-244105
FILE NAME: MT-5.DGN
SHEET NO. MT-5



USING VIRGINIA WORK AREA PROTECTION MANUAL TTC-28.2 LANE CLOSURE OPERATION IN AN INTERSECTION, CONSTRUCT THE PROPOSED 36" FORCE MAIN SEWERLINE FROM STA. 128+00 TO STA. 130+00.

PLAN
1" = 50'

REV. NO.	DATE	DRWN	CHKD	REMARKS

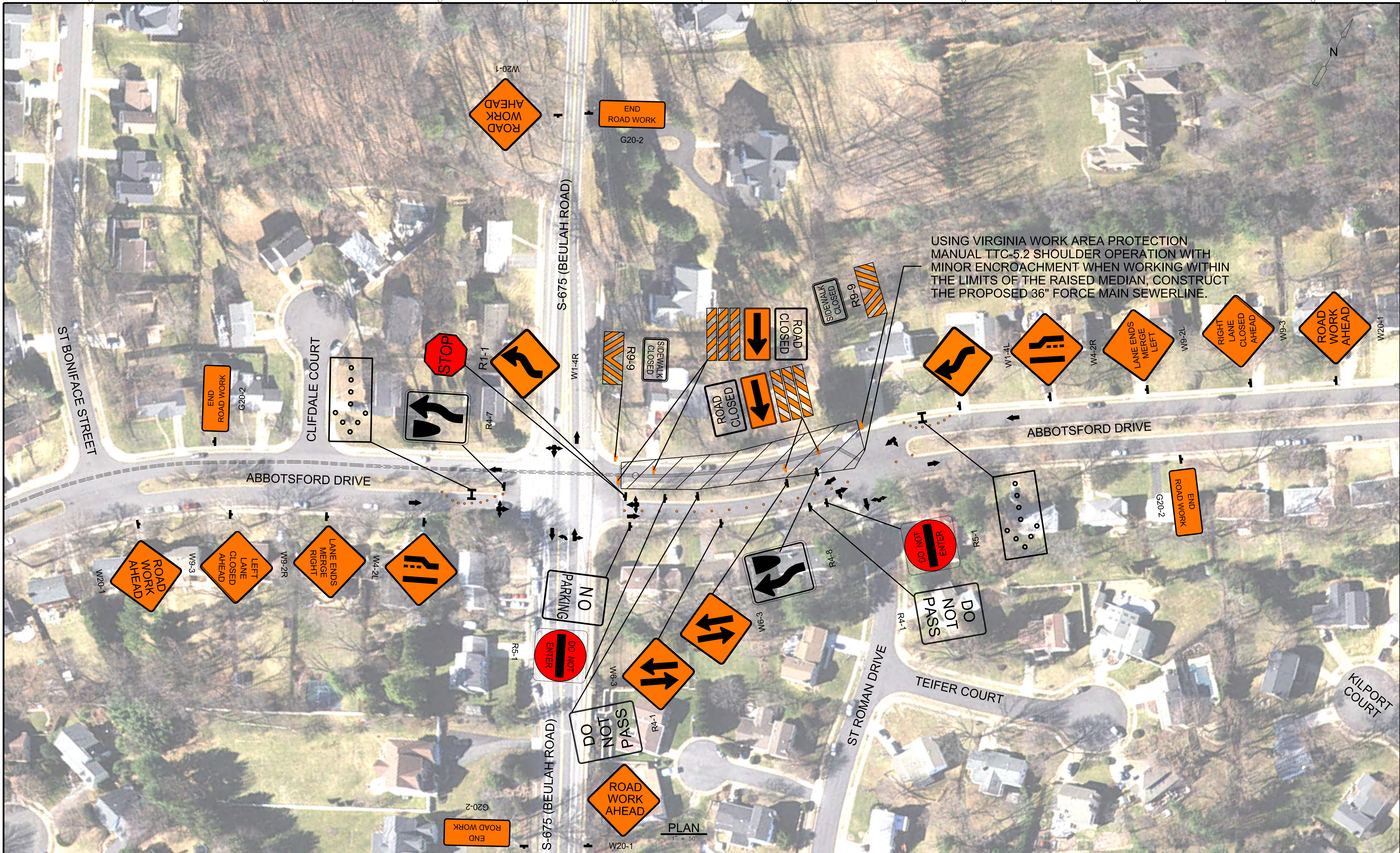
DESIGNED BY: K. SABO
 DRAWN BY: K. SABO
 SHEET CHK'D BY: K. PERSIANI
 CROSS CHK'D BY: _____
 APPROVED BY: _____
 DATE: AUGUST 2024

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PHASE 7 TRAFFIC CONTROL
 ABBOTSFORD DRIVE
 STA 119+51 TO STA 130+00

PROJECT NO. 5003-244105
FILE NAME: MT-6.DGN
SHEET NO. MT-6



REV. NO.	DATE	DRWN	CHKD	REMARKS

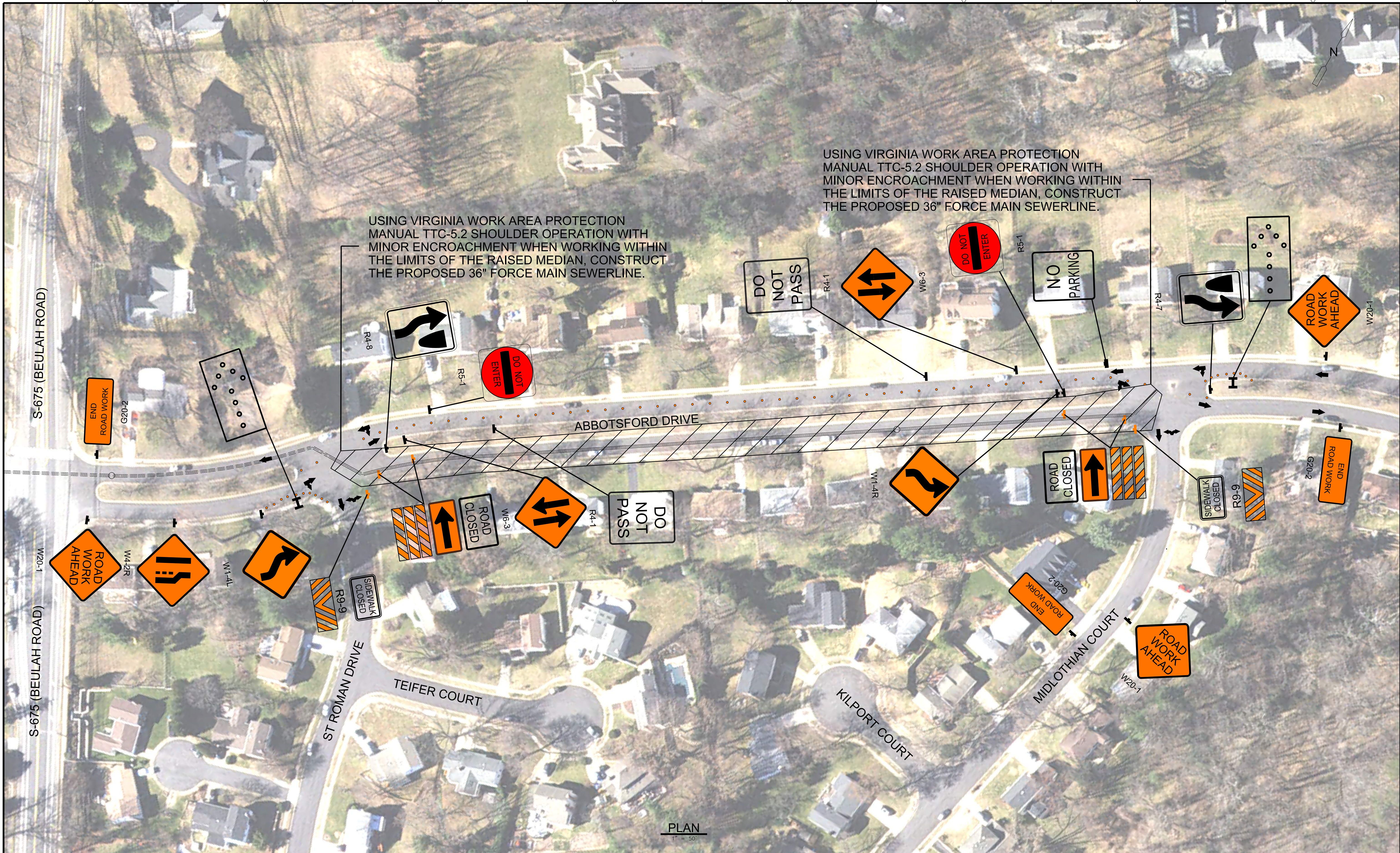
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 SHEET CHK'D BY: K. PERSIANI
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 APPROVED BY: _____
 DATE: AUGUST 2024

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PHASE 7 TRAFFIC CONTROL
 ABBOTSFORD DRIVE
 STA 130+00 TO STA 132+29

PROJECT NO. 5003-244105
 FILE NAME: MT-7.DGN
 SHEET NO. MT-7



USING VIRGINIA WORK AREA PROTECTION MANUAL TTC-5.2 SHOULDER OPERATION WITH MINOR ENCROACHMENT WHEN WORKING WITHIN THE LIMITS OF THE RAISED MEDIAN, CONSTRUCT THE PROPOSED 36" FORCE MAIN SEWERLINE.

USING VIRGINIA WORK AREA PROTECTION MANUAL TTC-5.2 SHOULDER OPERATION WITH MINOR ENCROACHMENT WHEN WORKING WITHIN THE LIMITS OF THE RAISED MEDIAN, CONSTRUCT THE PROPOSED 36" FORCE MAIN SEWERLINE.

PLAN
1" = 50'

REV. NO.	DATE	DRWN	CHKD	REMARKS

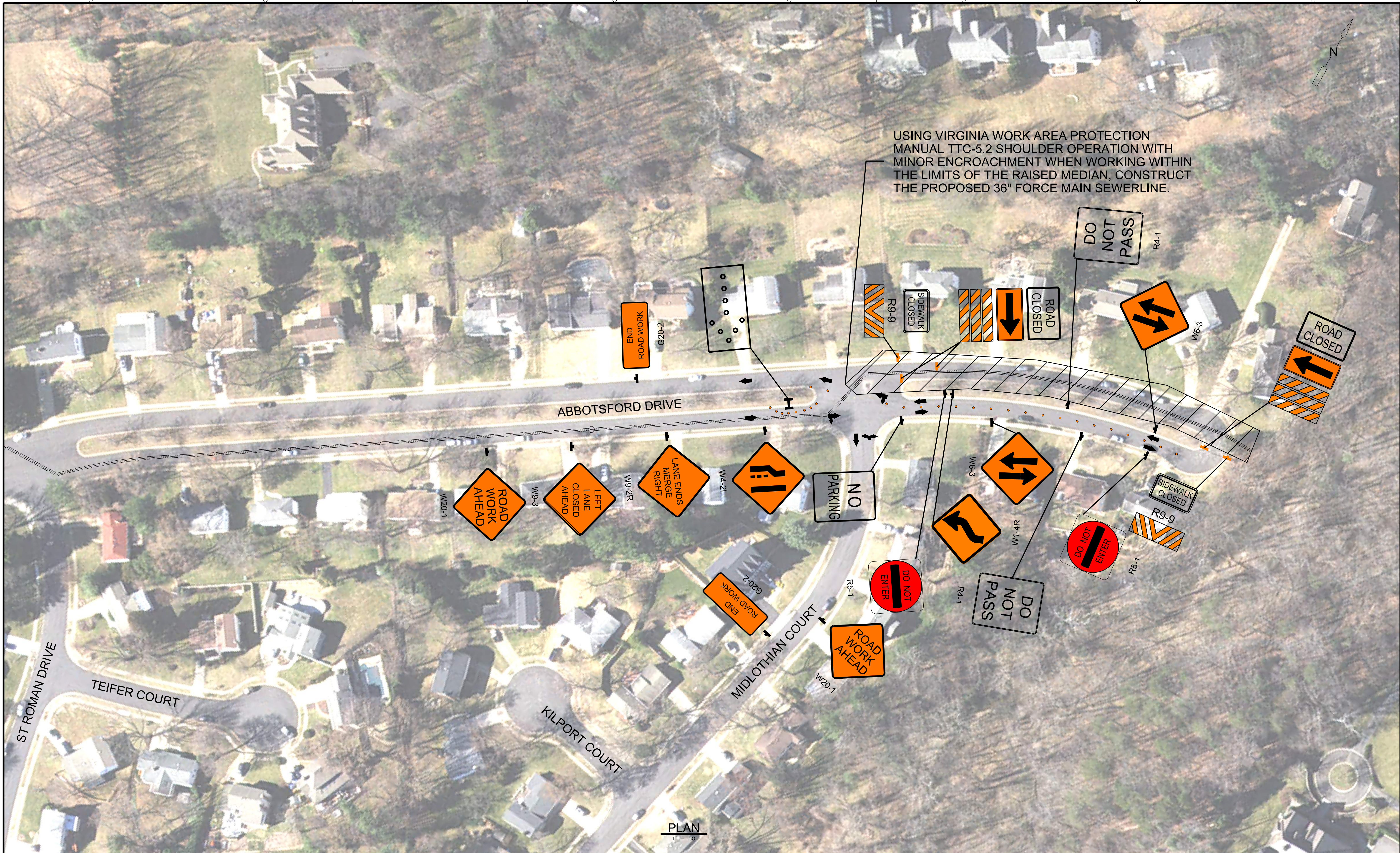
DESIGNED BY: K. SABO
 DRAWN BY: K. SABO
 SHEET CHK'D BY: K. PERSIANI
 CROSS CHK'D BY:
 APPROVED BY:
 DATE: AUGUST 2024



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PHASE 7 TRAFFIC CONTROL
 ABBOTSFORD DRIVE
 STA 132+29 TO STA 142+00

PROJECT NO. 5003-244105
 FILE NAME: MT-8.DGN
 SHEET NO. MT-8



USING VIRGINIA WORK AREA PROTECTION MANUAL TTC-5.2 SHOULDER OPERATION WITH MINOR ENCROACHMENT WHEN WORKING WITHIN THE LIMITS OF THE RAISED MEDIAN, CONSTRUCT THE PROPOSED 36" FORCE MAIN SEWERLINE.

PLAN
1" = 50'

REV. NO.	DATE	DRWN	CHKD	REMARKS

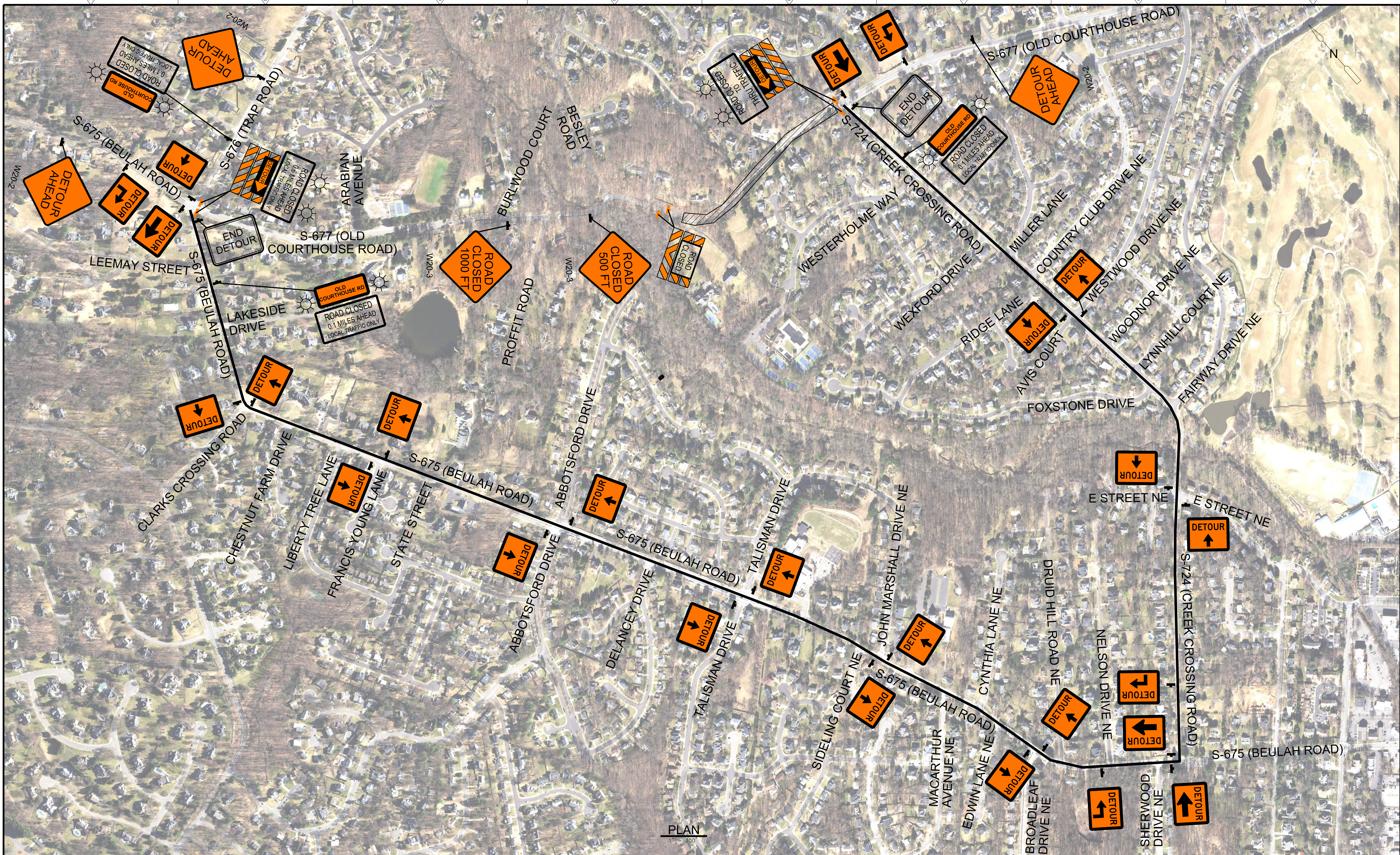
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PHASE 7 TRAFFIC CONTROL
 ABBOTSFORD DRIVE
 STA 142+00 TO STA 147+00

PROJECT NO. 5003-244105
 FILE NAME: MT-9.DGN
 SHEET NO. MT-9



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: K. SABO
 DRAWN BY: K. SABO
 SHEET CHK'D BY: K. PERSIANI
 CROSS CHK'D BY:
 APPROVED BY:
 DATE: AUGUST 2024

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PHASE 9 TRAFFIC CONTROL DETOUR
 OLD COURTHOUSE ROAD
 STA 152+00 TO STA 165+00

PROJECT NO. 5003-244105
FILE NAME: MT-10.DGN
SHEET NO. MT-10